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ABSTRACT

The booklet addresses a real need often expressed by teachers throughout Queensland for a concise yet comprehensive guide for those teaching in small schools (the paucity of material concerning small schools in the literature is rather surprising considering the very significant numbers of teachers and children who are or have had experience in this situation). The opening reading deals with small school organization and some of its inherent strengths and advantages and provides a setting for the following readings, each of which covers an aspect of the curriculum (language arts, mathematics, social studies, science, physical education, and art) and methodologies of the small primary school. The readings deal not only with the philosophical orientations of these subject areas, but provide thought-provoking questions about possible problems that will arise, and list practical suggestions for coping with these problems. Aspects discussed include objectives, content, methodologies, organization of time and space, resources, and evaluation. The readings clearly reflect that teachers in small schools are provided with a ready-made environment in which to achieve their educational objectives if they are concerned with aspects such as flexibility, child-centred experiences, social and emotional development, community involvement, and so on. (Author/BRR)

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Small Schools:

Organization and Teaching Methods

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Organization

Merv. Fogarty holds the degrees of B.Ed and B.A. from the University of Queensland. He is a lecturer in education at the North Brisbane College of Advanced Education and is editor of the journal, "Teachers' Forum". He has had experience in Queensland primary schools as teacher and principal of one, two, three and four-teacher schools.

Introduction

This booklet will meet a real need often expressed by teachers throughout the State, namely for a concise yet comprehensive guide for those teaching in small schools. There is a paucity of material concerning small schools in the literature and this is rather surprising when we consider the very significant numbers of teachers and children who are or have had experience in this situation.

The opening reading which deals with small school organization and some of its inherent strengths and advantages provides a setting for the following readings, each of which covers one of the curriculum and methodologies of the small primary school. These deal not only with the philosophical orientations of these subject areas, but provide thought provoking questions about possible problems that will arise and list practical suggestions for coping with these problems. Aspects dealt with include objectives, content, methodologies, organization of time and space, resources and evaluation.

The complexities for the class teacher and administrator operating in a small school context are obviously more intensive than those faced by teachers and administrators in larger school settings. However, one message that comes clearly through the readings in this book is that the teacher in the small school is provided with a ready made environment in which to achieve his educational objectives if he is concerned with aspects such as - flexibility, child-centred experiences, social and emotional development, community involvement, and so on.

The booklet has much to offer teachers who are working in or are interested in the small school.

G.R. STREETS,
HEAD, DEPARTMENT OF TEACHER EDUCATION,
NORTH BRISBANE COLLEGE OF ADVANCED EDUCATION.

JACK OF ALL TRADES, BUT MASTER OF ONE

This cartoon appeared in the April, 1958 edition of the Queensland Teachers' Journal. Though not entirely accurate in all respects to-day, it still captures the spirit of the small school. Further investigation has revealed that "Willow" is actually Laurie Bechly, Lecturer in Art at North Brisbane College of Advanced Education.

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Organization

INTRODUCTION

Though this chapter is entitled, "School Organization", there are two sections appearing in it that have a doubtful claim to be so included. These are the sections dealing with school architecture and team and co-operative teaching. They have been included because of the close relationship that they bear to school organization.

The discussion will centre around four sections: school architecture; traditional education; progressive education; and team and co-operative teaching. These will be further sub-sectionalised.

The text in the sub-sections will embody the following approach:

(a) the topic, e.g. "open education", will be defined and discussed in general terms; and
(b) the topic will then be applied to the small school setting.

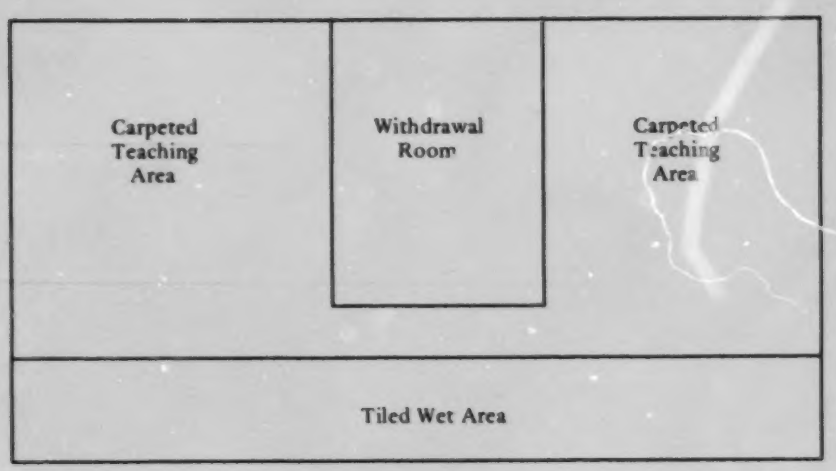
SCHOOL ARCHITECTURE

Important to school organization is the architecture of a school as it may limit the freedom of teachers to employ whatever form of organization they may desire. A teacher in a school that has brick walls separating rooms may have difficulty if he wishes to adopt an open approach that includes co-operative teaching. Also, a teacher in a large barn-like, open-area school may have difficulties if he wishes to employ another form of organization besides open education.

The influence of grading as a form of school organization may be seen in many of the school buildings that have been erected in Queensland. Most schools, large or small, have been built to cater for this particular form of organization. School design has taken the form of a series of boxes, placed side by side, on top of each other and so on. It is only in recent years that a new school design has emerged and all new schools, large or small, are being constructed according to it. These schools are termed, "multiple-area schools".

There are variations of the multiple-area plan, but the Department of Education now appears to have settled for the linear block. Figure One shows the basic floor design of a linear, multiple-area school.

FIGURE ONE



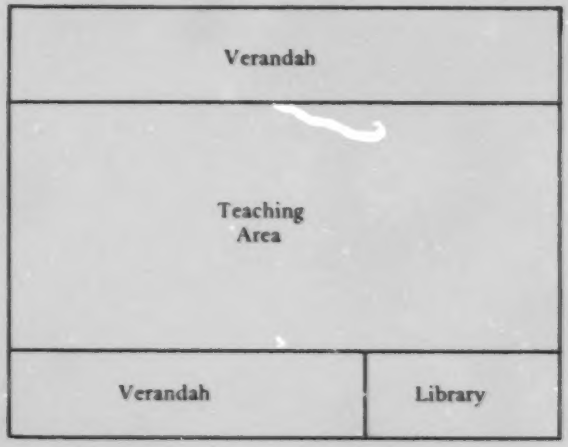
Each block has accommodation for approximately one hundred and twenty pupils - sixty pupils and two teachers to each teaching area. Separating the two teaching areas is a withdrawal room which is sound-proofed. This room is reserved for activities that may be noisy or visually distracting. A group may operate in this room without distracting the other children who are working in the teaching areas. The wet area is vinyl tiled and is used for "messy" activities such as painting, water play and the like. The teaching areas are carpeted and the ceilings have been acoustically tiled. A major consideration for this is to lessen the noise created by the free movement of children and the discussion of various groups working on different activities. Sliding doors allow quick access to outside teaching areas. Each block is low-set on a concrete slab. There are at least two, good reasons for this. Firstly, it eliminates the need for verandahs and passage ways and allows the total building to be employed for teaching and learning purposes. Also, it makes the immediate outside area part of the teaching and learning environment.

The major claim made for multiple-area schools is that they do not tend to impose one particular form of school organization upon teachers. As the name suggests, there are multiple spaces in each block that may be used for a variety of activities. Thus, teachers are free to choose the form of school organization that will best suit their purposes and the needs of their charges. Hamilton has aptly stated:

> *"The space provided should permit maximum flexibility so that teachers in it now and in the future might use professional discretion in selecting their methods of organization."*[1]

Now examine the floor-plan of a typical, traditional one-teacher school. Figure Two shows its basic design.

FIGURE TWO



There are variations of this plan, but it is obvious that the traditional one-teacher school is actually a multiple-area school, less some of the trappings of its more recent counterpart. The verandah may double as a wet area and the library as a withdrawal room. An open teaching space is already provided and teachers have only to move away from an "egg-crate" furniture arrangement.

A helpful Parents' and Citizens' Association and/or a resourceful teacher may add many of the trimmings of the newer-designed schools. The following statement was made by the principal of a one-teacher school:

> *"The local floor covering firm has supplied offcuts of carpet, which has enabled us to carpet almost the entire school. This particular firm is so keenly involved that they now act as scouts for extra carpet. When they lay a carpet for a client they ask if the used carpet is of any further use. If the reply is a no, and if parts of the carpet are usable, the firm mentions the school and it is ours."*[2]

Figures Three and Four show the basic floor plans of traditional two and three-teacher schools. Again, these are basically multiple-area buildings. As with the one-teacher school, the verandah may double as a wet area and the services room as a withdrawal room. If the folding doors that separate the two rooms of the two-teacher school are opened back, then an open teaching space is provided. If the same operation is carried out in the three-teacher school, then one large teaching space as well as one smaller one are provided.

The fact that all small schools are basically multiple-area schools is significant. Here they have an important advantage over some of their larger counterparts. They are not restricted in any way by their architecture. Teachers in small schools then, are free to employ whatever methods or forms of school organization they see fit.

FIGURE THREE

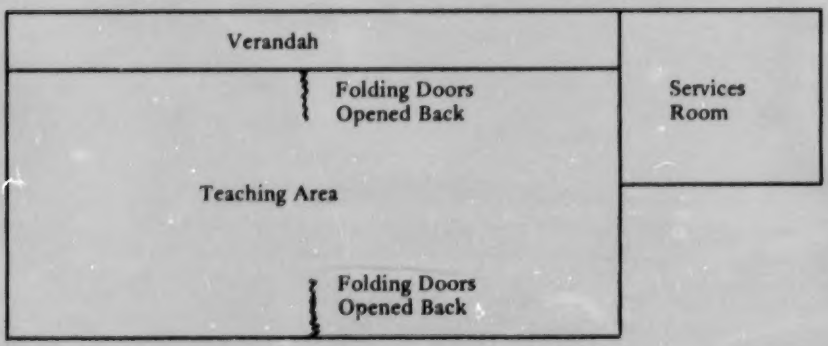
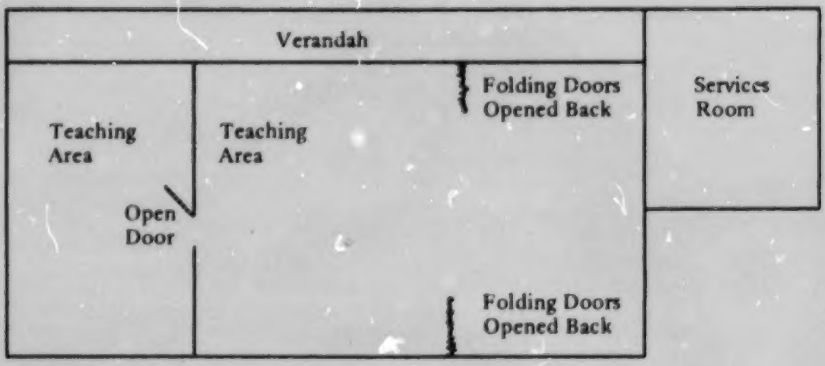


FIGURE FOUR



TEAM AND CO-OPERATIVE TEACHING

Team teaching is commonly defined as a process where two or more teachers plan, teach and evaluate together the learning experiences of a group of children that is the size of two or more conventional classes. The pupils may be brought together as one large group, divided into sub-groups or study as individuals depending upon particular teaching and learning situations. Though many team teaching models contain these three components, it is not essential that all three be employed in a program.

Some teams are organized vertically and supervise the learning of a range of classes or ages. Teachers in such teams usually have one or two subject specialities. Other teams are organized horizontally with students at the same class level. Team teaching is just as applicable to a progressive educational environment as it is to the traditional classroom.

The American model of team teaching is organized on a hierarchial basis. Such teams have a team leader responsible for co-ordinating the team as well as one or more senior teachers with different subject specialities. As well, there are the regular or staff teachers and one or more teacher aides. Salaries are relative to the position occupied on this hierarchial ladder.

The British model of team teaching, the one accepted in Australia, does not have a hierarchial organization. "Neutral" leadership is emphasized. There is no salary structure and leadership will change to suit particular situations.

Team teaching, for obvious reasons, is not applicable to the one-teacher school. Remembering though, that team teaching requires two or more teachers to plan, teach and evaluate together, at first glance, it would appear that it is quite well suited to two, three and four-teacher schools. There are limitations however, especially in relation to planning in small schools that are organized along traditional graded lines. These same limitations do not appear to exist in small schools that are organized along non-graded, open or other progressive lines of education.

In a two-teacher school organized along graded lines, preparation would increase considerably. Instead of planning for three or four grades, each teacher would be planning for seven grades. Preparation time would increase considerably. This would be particularly so with subjects such as mathematics and the formal areas of language arts where syllabi are spirally organized and grades are not combined for instruction.

Team teaching becomes a little more feasible in subjects such as science and social studies where two grades may be engaged on the one program but again, preparation would be doubled. Instead of preparing for one grade level, the two teachers would be preparing for two grade levels. With subjects such as music, art and physical education where the school may be divided into a senior and a junior group, team teaching may become much more of a reality.

If we accept the definition given at the begining of this section, team teaching becomes more and more viable as school size increases, e.g. in a four-teacher school with two teams of two teachers each, the preparation load would not be excessive.

Generally team teaching, in the strictest sense of the term, is not universally applicable to the small school situation, especially in relation to one, two and three-teacher schools. What we usually find in such situations are variations of team teaching, or co-operative teaching.

Co-operative teaching is an arrangement between or among two or more teachers in which they work together to provide educational experiences for a group of sixty or more pupils. Generally the teachers involved will make themselves responsible for various subject areas e.g. one teacher may take responsibility for the language arts program while another may take responsibility for mathematics. At the same time however, this does not absolve the teacher/s not responsible for a subject area from involvement in it. Co-operative teaching lacks the formal arrangements that exist in the team teaching situation. There is no place for a hierarchial arrangement

of teachers and the formal necessity for teachers to plan, teach and evaluate together is not strongly emphasized. Though these three processes are still part of co-operative teaching, the approach to them is much less formalized. The teachers merely decide between or among themselves how best to teach and guide the children in their charge. Co-operative teaching is applicable to traditional school organization as well as to the open and progressive forms.

This form of teacher organization is well suited to the small school. It is not difficult to conceive of the teachers in a two or three-teacher school co-operating in this less formal manner to provide for the education of their pupils. In fact, they would be working together without significantly increasing their work loads. It is also suggested that co-operative teaching in the small school situation is more appropriate when the approach is open rather than traditional.

One of the major disadvantages charged against co-operative teaching is that of incompatibility between or among teachers. I would suggest that the likelihood of this is much less in the small school than in the large school. The small number of teachers in country schools, the fact that they are in many respects different from the rest of the community e.g. they are non-permanent residents and they are the only residents employed by a bureaucracy and that they are very much in the minority in their close-knit rural communities, are conducive to the formation of close bonds between or among them. It is virtually impossible for them to avoid one another and so, they will be likely to make every effort "to get along". Really, they cannot afford the luxury of squabbling with a colleague or colleagues. This should enhance co-operative teaching by lessening the possibility of teacher incompatibility hindering the team approach. In the small school, the onus is on the teachers to co-operate.

TRADITIONAL SCHOOL ORGANIZATION

Teaching Composite Grades

Teachers in small schools that are organized along traditional graded lines are faced with the task of teaching composite grades. In the one-teacher school, all grades are taught by the principal who, of course, is the only teacher at the school. He may have as many as seven grades to teach but under normal circumstances, he would probably be teaching four or five.

In two-teacher schools, all seven grades are present. Normally the principal will teach years four to seven while the staff teacher teaches years one to three. There is no hard and fast rule in this respect. It may well be that the distribution of enrolments within the various grades will influence the classes that the principal and the staff teacher teach. It is possible that the principal could be teaching years seven,

six, four and three while the staff teacher teaches years one, two and five. This may be the only arrangement that will provide a degree of equality in the number of pupils that both are responsible for.

In three-teacher schools, usually the principal teaches years five, six and seven while one staff teacher teaches years four and three and the other staff teacher teaches years one and two. Once again there is no hard and fast rule and the above organization may be rearranged for a variety of reasons.

Someone, hearing of composite grade teaching for the first time, may be quite perplexed by the situation and wonder how one teacher can possibly teach two, three, four, five, six or even seven grades at the same time. Rigid time-tabling usually accompanies the graded form of school organization. The school day is divided into nine, thirty minute periods and one, twenty minute period. Figure Five shows how the day is sub-divided in this way. The figure refers to a school that commences at 9.0 a.m.

FIGURE FIVE

Time	Period
9.0 - 9.30	1
9.30 - 10.0	2
10. - 10.30	3
10.30 - 11.0	4
11.0 - 11.10	Recess
11.10 - 11.30	5
11.30 - 12.0	6
12.0 - 12.30	7
12.30 - 1.30	Lunch
1.30 - 2.0	8
2.0 - 2.30	9
2.30 - 3.0	10

Physical education is usually taken in the twenty minute period, though this is not mandatory. The other subjects are taken during the nine, thirty minute periods. During each of these periods, the teacher endeavours to teach two lessons both of about twelve minutes duration. While the lesson is being taken with one grade, the other grades engage in silent work, activities and the like that have been set by the teacher. Also, the teacher tries to ensure that there will be five minutes or so at

the end of each thirty minute period, for correction. This calls for a greater amount of skill on the small school teacher's part in condensing the main points of the lesson into a format that can be covered in half the time that it takes the teacher in the large school to do.

As you may well imagine, teachers who teach three or more grades in a composite situation are very busy people.

Combining Grades for Instruction

To lighten the load of preparation and teaching, teachers in small schools have found it convenient to combine grades for instruction in certain subject areas.

Normally grades are not combined in mathematics or the more formal sections of the language arts program. In science and social studies, teachers often combine two grades. Generally, teachers in small schools regard it as not advisable to combine more than two grades in these subject areas.

If grades are combined in the above manner, teachers must ensure that each pupil covers all the syllabi in these subjects during his primary schooling. A year's work in these areas should not be omitted or covered twice merely for the sake of convenience in combining grades. A brief explanation of how this system works is set out below.

Take for example, a one-teacher school with the following grades over a two-year period -

1979

Years	
VII)	Years VII and VI cover work in year VII syllabus in social
VI)	studies and science.
IV)	Years IV and III cover work in grade IV syllabus in social
III)	studies and science.
II	Normal program.

In the next year, the following situation would exist -

1980

Years	
VII	Covers work in year VI syllabus
V	Covers work in year V syllabus
IV III	Covers work in year III syllabus
I	Normal program.

Combining grades in this manner requires forward planning and record keeping.

In subjects such as music, art and physical education, wider groupings are employed, especially in one and two-teacher schools. It is possible to form two groups for instruction in these areas:

(a) junior school - years one to three; and
(b) senior school - years four to seven.

The less formal aspects of the language arts program, e.g. drama and creative writing, may be conducted in these groups also. Of course different standards according to relevant years would be expected. The various years represented in each group would sing the same songs, play the same musical instruments, paint the same pictures and so on. Teachers, by selecting from the syllabi for the appropriate years, work out comprehensive courses for these two groups.

Pupil Monitors

Teachers in small schools who adopt grading as their form of school organization have been assisted in their teaching by pupil monitors. These are higher achieving pupils who help lower achieving ones. It has been the practice that pupil monitors operate only within their own year levels. The situation of a seventh year pupil supervising the work of the lower grades has been frowned upon as very bad practice.

There are supporters and opponents of this practice but one would think that in the present educational climate there is not a strong need for pupil monitors. Some form of heterogeneous grouping, for example, would surely offer a better alternative. Also, the current practice of appointing teacher-aides to small schools, even though they may not be present for the full day or on every day of the week, must surely lessen the need for pupils to act in such a capacity.

Grouping

Grouping as a form of school organization involves both homogeneous and heterogeneous grouping.

The variations of homogeneous grouping are virtually limitless. Children may be grouped according to ability, achievement, age, sex, height, weight and so on and so on. As a form of school organization, the only two that appear to have relevance are ability grouping and achievement grouping and of these, I would favour the latter. My main reason for this is that pupils of equal ability may be achieving at different levels. There are innumerable variables that may create this situation and of course, my choice is made mainly for convenience.

Any form of achievement grouping must be flexible. Children should not be confined to the one group for the entire school year or perhaps, even their entire school lives. Usually children are assigned to groups on the basis of above average achievement average achievement or below average achievement. If members progress past or fall behind what are the normal limits for their groups, then they should be moved to the groups that best suit their achievement.

As well, if a school has homogeneous groups in reading and mathematics, as is the usual practice, pupils should be assigned to each group according to their achievement in each subject area, e.g. it is possible that a child may be an average achiever in reading and a below average achiever in mathematics.

Homogeneous groups may be sub-divided into streaming, intra-class grouping and inter-class grouping.

Streaming

Streaming is, of course, impossible in the small school. To stream, more than one draft of each grade is required. Such a situation obviously does not exist in the small school.

Intra-Class Grouping

Intra-class grouping is also unmanageable in the small school. It becomes more feasible as the size of schools increase. Take for example, a one-teacher school that has five grades represented. If the teacher were to sub-divide each year level into two or three groups based on achievement, he would have ten to fifteen groups to cater for. Obviously this is impossible. In the two-teacher school, one teacher would have from six to nine groups while the other would have from eight to twelve. This also would be an impossible teaching situation. In the three-teacher

school, one teacher would be teaching from six to nine groups while the other two would each be teaching from four to six groups. This may be feasible. Some teachers in one-teacher schools teach as many as six or seven grades but surely there are better alternatives than this.

Inter-Class Grouping

Inter-class grouping involves grouping children across year levels, e.g. a child in fourth year may read with the fifth years, do mathematics with the third years and work with the fourth years in all other subject areas. Pupils are assigned to an appropriate year level relative to achievement. Practice does not favour a pupil broaching more than one year level, e.g. a child in third year reading with the fifth years.

This form of school organization is particularly well suited to the small school. It does not increase the number of groups that the teacher will have to deal with. The teacher in the one-teacher school with six different year levels will have only six levels to teach if he organizes his charges into groups that cross year levels. Of course, the same is applicable to two and three-teacher schools.

Inter-class grouping however, does necessitate a rather rigid time-table. If a school were grouped in this way, e.g. in reading and mathematics, then all year levels would have to be time-tabled for these subjects at the same time every day to allow children to move from class to class. This would be especially so in two, three and four-teacher schools. As well, the allotted time for each of these subjects would have to be strictly adhered to so as not to disrupt the programs of the other teachers in the school. No doubt ways could be found around this problem in the one-teacher school but in two, three and four-teacher schools, there does not appear to be any simple or ready solution to it.

An objection frequently raised against inter-class grouping is related to the advisability of children of varying ages working together. It is argued that feelings of inferiority will develop when older children work with a group that is composed mainly of younger children. The social immaturity of younger children working with a group of predominantly older children is also frequently pointed out. In this regard the pupils of small schools have a significant advantage over their larger school counterparts. Because of the smallness of the community in which such schools are located, children of varying ages quite freely and frequently mix together at social functions in the district. Also, because of the smallness of the school, children of different ages are used to seeing each other in the same classroom. They have had experience at working together when different year levels are combined for instruction in particular subject areas such as social studies and science, and they must mix together in the playground so that they will have the

necessary numbers to play team games. Children in such schools then, are used to mixing across age levels and this does not present the problems that it is assumed it does in larger schools.

Heterogeneous Grouping

The discussion on grouping thus far has centred on homogeneous grouping but heterogeneous grouping, as a form of school organization, also has its adherents. Family grouping is such a form of heterogeneous grouping but since it is more applicable to schools whose approach is open rather than traditional, discussion on it will be withheld until the next section which deals with progressive education.

PROGRESSIVE EDUCATION

Non-Grading

Non-grading is a form of school organization that attempts to cater for the individual differences of pupils and stresses continuous progress of individuals at their own rate. Grade or year labels are removed as is the retention or skipping of grades or year levels. The rate of progress of each pupil is not dependent upon that of the other pupils in his year. He merely moves from one learning level to the next as performance in the various subject areas indicates suitability to do so. The progress of each pupil is set by his readiness, interest and capability.

Differences between grading and non-grading are outlined in Figures Six and Seven.

The graded system (Figure Six) is seen as a series of boxes, each box representing one year of schooling. A specific amount of content is to be completed every twelve months. If the content is mastered before the set time, students mark time. Their teacher does not wish to encroach upon the work of the teacher in the next grade.

If the student is able to acquire the required amount of knowledge in the required time, he moves into the next box where the same process begins again and so the process continues for the seven years that a pupil is in the primary school.

If a student is unable to learn the required amount of information in the required time, he is made to repeat the year before proceeding to the next box. Studies show that unless there are exceptional circumstances, pupils gain little from repeating a grade. Exceptional circumstances refer to instances such as a child who may have been absent from school for an extended period because of a prolonged illness. A child of average or above average ability in such a situation would most likely benefit from repeating a grade. Even so, such a child would be repeating work

with which be was already familiar, i.e. the work that he was present for the previous year.

There is a limit to the number of times a pupil may repeat a year. Once seems to be the accepted practice. If the pupil does not benefit from this experience, he is from then on promoted annually and gains little from the time spent in each grade because the work is too difficult. In fact he merely becomes a passenger.

FIGURE SIX

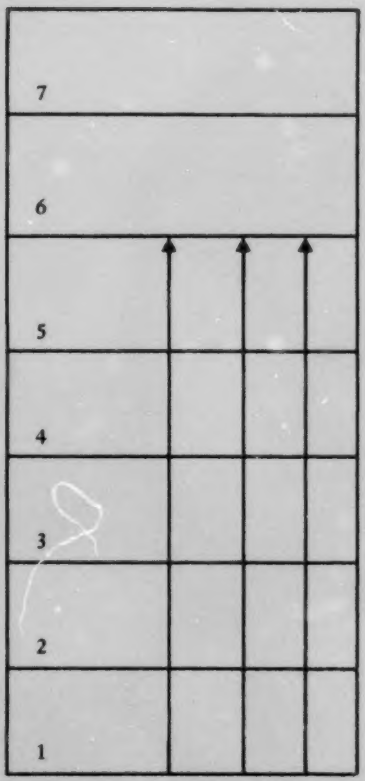
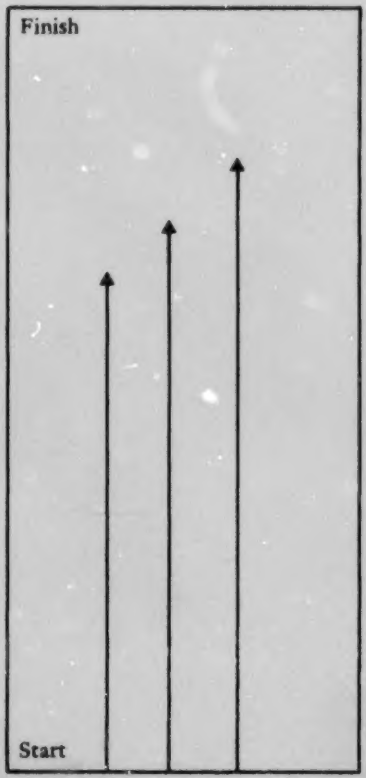


FIGURE SEVEN



The non-graded system may be viewed as a single rectangle (Figure Seven) representing the seven years of primary schooling. The content is divided into much smaller units or levels than the seven boxes that represent the graded system. When a pupil has demonstrated that he has mastered a particular level in a subject area, he then simply moves on to the next level and so the process continues in this manner. There are no time limits placed on this progression nor is it dependent upon other pupils in a similar year reaching this level.

There are no retardations, annual promotions or accelerations. Failure is not really known in this form of school organization. Children returning to school after, e.g the mid-summer vacation on an extended absence, merely start again where they left off before the vacation or the absence. In the latter case, there are no gaps in the child's learning because the other children in that particular year have moved on during his absence.

Pupil progress varies from one individual to another or from one subject to another with the same pupil.

The arrows in Figures Six and Seven represent three students, all of whom commenced their schooling on the same day or they may represent three subject areas for a particular pupil. Irrespective of the individual aptitudes and abilities of pupils, grading would expect the three children who commenced school on the same day or the three subject areas for a particular pupil to have reached the same level after five years of schooling (Figure Six). Non-grading has no such expectations. If the three pupils are of varying abilities or the same pupil has differing aptitudes for the three subjects, the position may well be as shown in Figure Seven. The three pupils have reached three different levels or the same pupil has reached three different levels in three subject areas.

A common mistake is the equating of non-grading with grouping. Grouping is not necessarily a part of non-grading though it is often employed for convenience, e.g. when certain pupils have reached the same level in the same subject area. Groups cannot be maintained for long periods of time. When pupils are put into groups, this merely means that at a particular point in time, certain pupils' paths have crossed. The pupils thus grouped however, will most likely be progressing at different rates and so, it will only be a matter of time before differences in achievement are again noticeable. Any form of rigid grouping has no part in non-grading.

Non-grading requires a set body of knowledge to be learned, just as grading does. The major difference between the two is that non-grading provides for the pupil to cover the content at his own rate while grading has no such provision.

Relative to work loads there appears to be no advantage for the small school over the large school or vice versa. Provided pupil-teacher ratios are similar, the functioning of a non-graded program in a large school will not differ significantly from that in a small school. It will function in much the same way in both cases.

Where the small school does have an advantage over many of its larger counterparts is in its architecture. All small schools are basically multiple-area schools (see previous section dealing with school architecture) and so, they are not restricted in the forms of school organization that they may employ. Small schools are well suited to the operation of non-grading. Many larger school buildings are not so flexible expecially the older ones which have been constructed to cater for grading and have fixed walls between rooms. This is not to say that a non-graded program could not operate in such schools but they would probably do so with certain difficulties and limitations.

It is a popularly held view that only teachers who accept the philosophy of non-grading will succeed in its implementation and operation, and this view is difficult to ignore. Certainly, for non-grading to reach its fullest potential, it requires the involvement of all teachers. It is more likely that a school with two or three teachers would have a to staff commitment to non-grading than a school with fifteen, twenty or more teachers. Total commitment of the staff in a large school to the one form of school organization is extremely difficult, if not impossible to achieve.

Flexibility in the utilization of staff, the scheduling of programs and the grouping of pupils are also significant components of non-grading. Once again, this appears much more feasible and easier to organize in the small school than in the large school.

The same objections are often raised against non-grading as are raised against inter-class grouping, namely, the emotional problems relative to older children working in groups of predominantly smaller children and vice versa. The reply to this criticism in relation to non-grading is the same as it is in relation to inter-class grouping. (See previous section dealing with inter-class grouping).

Finally, it is often stated that one of the major difficulties relating to non-grading is that too much time and planning are involved in establishing and carrying out a successful non-graded program. In the initial stages, a deal of planning and effort are required, e.g. reorganizing set syllabi into levels. Here the large school does appear to have a significant advantage over the small school. It is able to call upon the combined efforts of a larger number of staff than the small school where the full load falls upon the shoulders of one, two or three teachers. However, once the initial planning and organization has been done, the work-load of teachers, whether they be in large or small schools, should be similar.

Open Education

In attempting to establish what open education is, it is pertinent to view the following quotations.

Cullen:

> *"As a pupil I was one of Pavlov's dogs. I was so well conditioned through frequent repetitions, continuous reactions, plenty of arithmetical and other mumbo-jumbo (such as the two times table) fear of failure, hopes of reward, being kept in and slap-bang-wallop, that in good Pavlovian style I responsively salivated when teachers and examiners rang their confounded bells."*[3]

Bryant:

> *"Their [supporters of open education] philosophy is based on the argument that while all children are different, no child must be made to feel inferior to any other. Arising from this they reject any form of selection or rigid streaming and aim to teach individual children instead of classes. They point to the importance of using a child's interest to motivate learning, and say that teachers must become informal guides rather than formal instructors."*[4]

Dixon:

> *"Are we right to say 'learn this or learn that because you will need it in the life that lies before you?' I believe that the rate of technological change is so fast that even the most visionary teacher can only vaguely define the content of any body of knowledge to be imparted to the young . . . exactly what must be learnt is to say the least, very questionable territory."*[5]

The statement by Cullen obviously does not refer to open education. It is about as far away from it as one can go. The statements by Bryant and Dixon do refer to open education. Synthesizing then, open education is a form of school organization that emphasizes individual differences, self-discipline and intrinsic motivation, but de-emphasizes formal instruction and set syllabi. It stresses the "HOW" in education rather than the "WHAT". Of course this is open education at the far pole just as Cullen's description of traditional education occupies a corresponding position.

Experience shows that there is a difference between open education in its idealistic

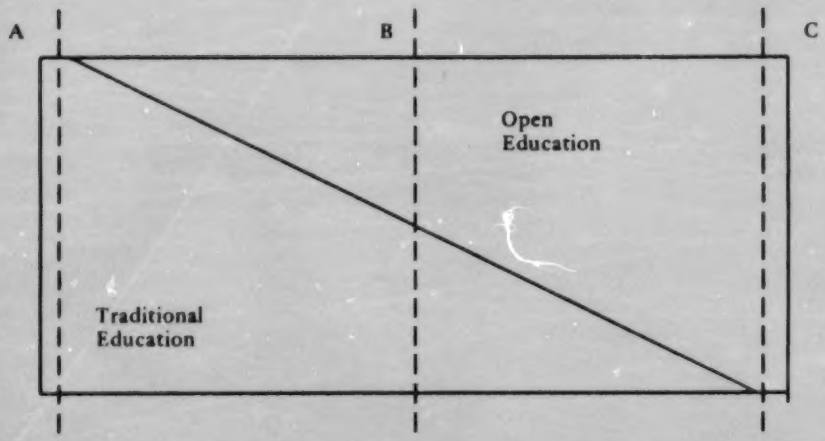
sense and open education as it operates in practice. Though the stress is upon self-discipline and intrinsic motivation, one should not overlook the fact that a child's behaviour in school is not dependent entirely upon conditions within his learning environment, but may be influenced by conditions external to it. Consequently, extrinsic motivation and external discipline should not be overlooked.

Although formal instruction and set syllabi are de-emphasized, this does not necessarily mean that they should be eliminated. From 1970 onwards, there are adequate articles written by practising teachers and published in the "Times Educational Supplement" which acknowledge that formal teaching still has a part to play in the open setting. Recent support for this view is given in the Bennet Report,[6] and commenting upon it, Professor Noel Entwhistle, Professor of Educational Research at Lancaster University stated that, "the findings suggest in unequivocal terms that formal methods of teaching are associated with greater progress in the basic skills."[7]

A close companion of formal teaching is the set syllabi. One may point to its futility because of the speed with which our current body of knowledge is changing. However, we must not neglect the present due to our concern with the future. Pupils will require certain knowledge now and in the immediate future to equip them for current living and knowledge gained at this point may well be the basis for further understandings. Not all learning can be left to chance. Recalling Professor Entwhistle's statement, it appears that some set work in the basic subjects at least, is essential.

What open education appears to require in practice is an atmosphere where traditional aspects are included within the framework of open education. Figure Eight adds further clarification. Open education, as it is practised, would take up a position to the right of B but closer to it than to C.

FIGURE EIGHT



Small schools and open education are very compatable. As stated in the section entitled, "School Architecture", all small schools are multiple-area schools. Space then is not a limiting factor. However, at this stage, it should be pointed out that though multiple-area schools may be conducive to open education, they are not indispensable.

> *"It [open education] should not be taken to mean what goes on in architecturally open classrooms or open space units. The availability of an architecturally open classroom or unit is neither a necessary nor a sufficient condition for open education . . . it was in the traditional classroom in England that the open education movement had its beginnings."*[8]

With open education, the child (within the limits previously mentioned) is responsible more and more for his own learning and the teacher is more and more a guide to learning rather than a director of learning. Traditionally, pupils in small schools have had to assume more responsibility for their own learning than have their counterparts in the large school. In a room where there are three, four, five or more year levels with one teacher, it is obvious that the teacher cannot be teaching

each class at the same time. All but one year level will be engaged in tasks where the children work by themselves relatively free from direct teacher supervision. Children from small schools then, should adapt quite readily to the open situation. It is reasonable to assume that in the large school such a change would be much more dramatic. However, it should be pointed out that whether a school is large or small, the change to open education should be a gradual one.

Teachers in the small school situation are used to dealing with pupils as individuals or in small groups. In one-teacher schools especially, teachers are virtually forced (because of the smallness of enrolments) to cater for individual differences and so, virtually devise independent programs for individual students. The role of guide to learning rather than director of learning is closer to the role of the small school teacher than to that of teachers in self-contained classrooms in large schools.

In an open situation, children of various sizes, ages, abilities and the like would be interacting, communicating and mixing together. The advantages of the small school in this respect have already been discussed in the previous section on non-grading. Basically, there is nothing new here for the small school child.

Compatibility of teachers and a similar conviction to the philosophy of open education so that it may be implemented throughout the whole school appears more real in the small school than in the large school. It is more likely that a school with a staff of two or three teachers would have a total staff commitment than one with e.g., seven or more teachers.

It is reasonable to assume that in the small school there is less likelihood of teacher incompatibility than there is in the large school. When there are only two or three teachers in a school they are more likely to make a greater effort to "get on" with each other. Of necessity, they must interact, perhaps several times a day, as there is little opportunity to avoid each other. Also, especially in remote areas, colleagues are likely to be the only people with whom they may discuss certain problems on a common ground. As previously stated, teachers in small schools cannot afford the luxury of squabbling with a colleague or colleagues.

It should be pointed out that unless teachers are committed to the philosophy of open education, there seems little point in trying to impose open education upon them, e.g. a principal ordering his staff to organize their classes along open lines. If a teacher conscientiously believes that the traditional approach to education is the best form of organization, then such a teacher will probably operate most effectively using this approach.

Family Grouping

Family grouping is heterogeneous grouping and is more applicable to schools whose approach is open rather than to schools whose approach is traditional.

Children of two or three age-ranges are assigned to the one class. There is variety in the way this form of school organization operates, but generally it is not advisable to extend the age-range further than three years.

The term, "family group", is derived from the fact that the age-range in such groups is similar to that found in many families.

The child remains in the same group and with the same teacher/s for each three year period. If the age-range for such a group was from eight to ten years, then at the beginning of each year, approximately one-third of the group from the previous year, those who are now eleven years, would move on to another group while their places would be taken by a new group of eight year olds. Each child's progress is as an individual within a stable and continuing community. It is claimed that the family atmosphere which results from such a grouping plays an important part in the emotional, social and intellectual development of the pupils.

The child is not forced to mix only with pupils his own age. Some prefer older children to work and play with, while there are some who prefer to mix with younger children. These differences are related to differences in maturation and interest.

This approach to grouping then, regards as advantages those aspects that are regarded as disadvantages of traditional grouping namely, feelings of inferiority when older children mix with groups of predominantly younger children and the immaturity of younger children who mix with groups of predominantly older children. Family grouping allows the child to work in a peer environment similar to that found in his family or neighbourhood.

Family grouping, or a variation of it, has always existed in the small school, e.g. combining the pupils into junior and senior groups for instruction in music, art, physical education and sections of the language arts program as well as the combining of two year levels in science and social studies. The similarities are also apparent when it is considered that the same groups of multi-age children are assigned to the same teacher/s for two or more years.

There is a close resemblance between family grouping and traditional small school organization. Small schools that make the change from grading to open education should have little trouble in including effective family grouping. In fact, it is conceivable that family grouping in small open schools cannot be avoided.

Because this form of organization apparently has been borrowed or based on small school organization, the pupils and teachers in such schools should be much better prepared for such a change than their counterparts in the large school.

CONCLUSION

The small school, relative to school organization, has advantages over its larger school counterpart. The architecture is not physically restrictive. If the teachers wish to teach using traditional or progressive forms of organization they are not hindered in any way by the buildings in which they operate.

The small numbers of teachers make it more likely that the total school staff will be committed to one particular philosophy of education thus providing continuity for the pupils.

Because of the way in which small schools have been organized, any movement into more progressive forms of school organization will probably be smoother than in larger schools. Certain disadvantages that exist for the latter do not exist for the former.

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2

Language Arts

Mick Johnson is a teacher at the Leichhardt State School where he teaches composite grades. As well as having taught composite grades in one other large primary school, he has served as principal of several small schools throughout Queensland. In 1975 he received an Innovations Grant from the Australian Schools Commission for the use of Video Tape Resources in Language Arts.

Language Arts

"The language arts present a concept of a whole, developing language that serves to organize and enrich human experiences. This concept thus opposes the notion of specific subject matter divided into separate child compartments. While it includes the four areas of communication - listening, speaking, reading and writing - special emphasis is placed on their interdependence and integration!" I have not attempted to cover the four areas in any great detail. However, you will find that the activities do indicate some degree of integration. The strategies that I have listed work successfully in both small schools and in situations where there are composite classes and I would like to share these ideas with my colleagues in small schools throughout the state. Some of these strategies you may have already tried, others you may have to adapt to suit your own situation.

In the small school or composite grade situation, a helpful strategy for use in creative writing is to work children in family groupings so that there is a sharing of ideas. If, for instance, Years Five, Six and Seven were writing stories around a particular theme, e.g. flight, I would ask children in this group to contribute ideas that could be the basis for a story. Ideas such as birdmen, balloonists, exploits of the Wright Brothers, Kingsford Smith's crossing of the Pacific, and the Flying Doctor Service are just a few that could perhaps stir the imagination of children in this age group. From this interchange of thoughts, some time could be spent discussing various aviation programmes seen on television or in films and also, in research in the library.

Having established the necessary background information, the next phase in the task is to establish a word bank where a list of nouns, verbs, adjectives and adverbs is compiled by the pupils. While preparing this vocabulary list the pupils will have the opportunity to incorporate any synonyms and antonyms that might prove useful in their stories.

Prior to putting their thoughts down on paper some time would be spent on discussing possible paragraph headings. Children should be encouraged to make frequent use of the word bank and during the writing of the initial draft of their story, it is helpful if they underline any words that they select from this list. Thus teachers are able to see at a glance the growth in the pupil's vocabulary.

After the pupils have written their story, they exchange their work with other members of the family group for proof reading. During this phase of the exercise, pupils have the opportunity to view the work of their peers and gather a few ideas

they could use in the future. It is not unusual for older members of the family group to sort out the errors in the work of the other group members so that corrections can be made immediately. After this has been done, the pupils should then examine the work of members of other family groups. Prior to rewriting the final draft of the story, several people could be invited to read aloud their work to other group members.

In Years Three and Four, similar procedures to the above could be adopted. However, it would be a useful exercise if pupils in this age group were to relate their thoughts orally and have them recorded on cassette tape. These thoughts could then be replayed to other members of the group so that ideas can be consolidated before they actually start to write their story.

Children at this level should be encouraged to read one another's stories so that they can gather ideas for future use in their own work. They are able to help one another and through proof reading, many of the common errors are corrected before writing the final draft. The word bank is an extremely valuable aid in these grades and pupils should be encouraged to make use of it whenever possible. This could be an ongoing activity where these words are permanently displayed in the classroom.

The cassette or tape recorder is an extremely useful teaching aid in various facets of language arts. It can be put to good use in gauging the fluency in oral reading exercises. In Years Four - Seven, pupils may work in pairs, reading orally to one another and having their efforts recorded. After the playback, the reader should be invited to make a comment on his effort. By judging their own efforts the pupils are looking for avenues where they can improve their performance and over a period of time, this self evaluation must surely bring about an improvement in the standard of reading. It is surprising how children will critically evaluate their own work, thus making it easier for the teacher to get across to his pupil any helpful hints that he has to offer. The reader now does not see the teacher as a critic but a person who can help him with his problems.

The casette recorder can also be used to play tapes of good reading models to children. It is essential if children are to improve their reading, they should have the opportunity of hearing oral reading of stories, poems and plays by adults or by selected pupils from their own school who are fluent and articulate. Exercises of this nature integrate reading and listening into the one activity.

Another helpful strategy that can be employed in the field of reading is to make use of the overhead projector for make believe news broadcasts. The mini-news bulletin is written on the transparency which is then projected onto a screen in front of the reader. The reader sits with a duplicate copy of the bulletin in front

of him. As he reads, he is encouraged to look up at various intervals and read from the projected image. This is a helpful strategy for encouraging pupils to speak out to their listening audience instead of speaking down to the book which is quite common with inexperienced readers.

Students are fond of playing the role of newsreaders and short news bulletins can be prepared by selecting four or five news items from the daily papers and pasting them onto a card. Some pupils may need assistance with the pronunciation of names of people and places, especially if items of international news are chosen. It is advisable that they overcome these minor difficulties, paying particular attention to punctuation marks, before they read their bulletins to the class. Every encouragement should be given to them to read fluently in a well modulated voice. Bulletins can be recorded and after the playback, the readers should be invited to comment on their effort and suggest any ways by which their performance could be improved. Activities of this nature serve not only as a valuable reading exercise but can also be integrated with social studies as it keeps the pupils up to date in current affairs.

Other pupils in the primary school take great delight in being able to read stories to children in lower classes. This is a valuable exercise for the capable reader as the opportunity presents itself with a ready made audience which is eager to listen to stories. It is not unusual for these specially chosen readers to take great pains to get their message across to the young audience and a little realism could be added to the exercise if the narrator could quickly don a costume which gives him a little more prestige and creates a lasting impression in the minds of the young listeners. This serves as a dual purpose of providing reading opportunities for the pupils in the upper classes and an exercise in listening for the pupils in the infant group.

Children in rural areas often have occasions to handle containers of chemical sprays which are highly toxic. It is important that pupils are conscious of the dangers of these chemicals and that they can read the instructions for their usage. As a project, students could gather labels from various cans of sprays, dips, insecticides and weedicides and insert them in a class poisons' directory. Approaches could be made to chemical firms and stock and station agents as possible sources for these labels. Seeing that pupils will have opportunities to use these poisonous substances, it is important that they are familiar with the various chemical terms and are also capable of understanding the precautions necessary when using them. This is where reading can be integrated with lessons in health and science. When put to good use, this directory could be a practical way of educating pupils in rural areas to the dangers of poisonous chemicals which, in the long term, may result in the prevention of accidental poisoning.

Instructions on food packages could be a valuable reading resource, especially if pupils are planning a class or school camp. Dehydrated and canned food labels

could be collected and read by pupils prior to the camp and then discussions held with regard to the food order and the menus that would be used for the duration of the exercise in outdoor living.

People living in rural areas often receive, through the mail, catalogues from the large commercial organizations and department stores in the capital cities. Naturally the glossy pictures attract a great deal of attention, especially if the goods offered for sale are of particular interest to the children. As an exercise in reading and research skills, the teacher could pick on an item, e.g. a trail bike, and have a group of pupils study the catalogues to find a model suitable for use on their property. They might look for details such as the horse power rating of the motor, size of the wheels, availability of spare parts including tyres and so on. While researching to see which company offers the best deal, they are involved in a worthwhile reading exercise as they weigh the 'pros and cons' of the various models available. Mathematics may be integrated into this exercise when pupils work out the cost of the machine, bearing in mind such factors as freight, registration and insurance and also, the cash price when compared with buying it on hire purchase through a finance company. This practical exercise provides pupil enjoyment and employs reading, research, speaking and computational skills.

Radio and television commercials provide interesting material for exercises in listening and observing. For schools fortunate enough to have video tape recording equipment, a teacher could record, "off air", four popular commercials for the basis of the lesson. If this equipment is not available, cassette recorders could be used to record from the radio, a number of commercials. These are then played to a class four or five times within half an hour. After the first replay, the pupils have a general idea that a commercial contains certain key words. Subsequent replays could reveal how often the "punch line" in each commercial is repeated and whether visual or auditory presentation was being made. Observations made by the pupils could reveal theat manufacturers often make use of attractive models, catchy tunes or topical events, e.g. Olympic Games, in order to sell their products. They should be encouraged to develop a critical attitude towards commercials in order to avoid brainwashing. Claims made by various manufacturers about the quality of their products could be discussed so that pupils can build up a resistance to the urge to become compulsive buyers. This listening and observing skill can be integrated with work on consumerism in developing an awareness of the persuasive techniques employed in the advertising industry.

Many country areas in Queensland have very active historical groups which are interested in preserving relics from the past. In other communities, e.g. old mining towns, some of the pioneers probably have vivid memories of the boom years. It would be a shame to see these people pass on without some of the local history being recorded. As an exercise in writing and speaking, a group of pupils could

prepare a series of questions for an interview about the early settlement in the district. Having done this, they could arrange to visit some of the senior citizens or well known identities in the area for an interview which could be recorded on cassette. When replayed to other members in the group, it could provide valuable information for an exercise in social studies and at the same time,create a better understanding of the points of view of the elderly people in our community. Through having the younger generation learning to appreciate the problems of the past and the sacrificies made by the pioneers of the district, there is a chance that the generation gap will be narrowed.

Vocabulary development is an exercise that can be taken with several classes working together. The weather is always a good conversation starter in country areas and provides scope for outdoor activities involving language and science. Questions such as: What colour are the clouds? What do they indicate? Can you describe their shape? Are they casting shadows? What do they bring? How are they formed? Do they indicate changes in the weather? will soon trigger their imagination. A word bank should be compiled from the answers given by the pupils and as a follow-up exercise, pupils could make a chart of the various cloud formations, their names and what they indicate.

Another exercise for use in vocabulary development is to have children research social studies books to see what type of hats people in the various countries of the world use. As a craft activity they could make some of these and then have a hat parade. The children should be encouraged to provide as much information as possible about their hats and the countries in which they are worn. Topics such as the materials used, reasons for their use, why they are made that way and any religious significance are just a few of the avenues that may be explored in the discussion. This provides an opportunity for children to compare their way of life with that of their peers in other parts of the world.

Children could also participate in a vocabularly exercise based on the word, "feet". This involves drawing an imprint of a foot and then giving various phonic clues, e.g. sk, st. and the like so that they build up a list of verbs that indicate things that feet can do. Words such as skip, skate, stomp will readily come to mind. However, more phonic clues may have to be supplied to make the list as extensive as possible. Drawings of the feet of various animals could be incorporated into this exercise so that the word bank increases in size.

Finally, I would like to suggest a use for the Polaroid camera in the small school situation. These items of equipment are relatively inexpensive and they produce a colour print in a short space of time. The teacher could take photos of individual children in the lower classes and each print could be inserted in a note book to be known simply as "ME". Whenever children in these classes do any writing activities

that are of a high standard, the edited version could be written into this pad if the teacher is satisfied with the quality. This book becomes a progressive record of the child's notable achievements in this area and it could carry over from year to year so that, by the time the pupils reach the end of primary school, they have a record of work of which they can be justly proud.

Finally, I wish to express my gratitude to the Australian Schools Commission for the innovation grant which allowed me to carry out work with video tape equipment in the field of language arts.

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3

Mathematics

Alan Yarrow holds the degrees of B.Ed. and B.A. from the University of Queensland and M.Ed. from the Canberra College of Advanced Education. He is a Senior Lecturer and Head of Educational Practices at the North Brisbane College of Advanced Education. In 1978 he published a text on the use of media in mathematics. He has had experience in Queensland primary schools as teacher, mathematics advisory teacher and principal of small schools.

Mathematics

A PRECAUTION

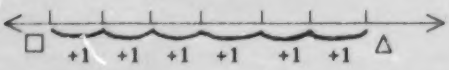
Whilst the chapter deals with Mathematics specifically, it is important not to get carried away with the subject's individual importance. Integration is the name of the game, e.g. children's oral and written expression will be practised and improved when giving their maths report on activities; social science skills of co-operation will be fostered when group work is undertaken and so on. Coming the other way, mathematical activities have more fun and purpose when integrated with other subjects e.g. in Science, calculating the volume of the aquarium and thus the number of fish it will support using the appropriate formula.

Whilst integration of subjects is extremely important, so too is the integration of the 9 topics within the Mathematics Program. Although these (Number, Numeration etc.) have been outlined separately, and although there will be need from time to time to teach distinct skills, mathematics should be taught in an integrated manner.

Below are two examples of integration of the 9 topics. Firstly, a single lesson sample is given and secondly the outline of a unit plan is provided.

1. *Single Lesson*

Number Sentences and Problem Solving (Stage 3)

a) 

□ is odd,
then Δ is odd or even.

NUMBER

b) Forty - ½ x 14 = □

NUMERATION

c) (3x5) + 4 = □

SET TERMINOLOGY - 3 sets with 5 members in each

d) 2 x 98 Δ 200 - 20 Put in > or <

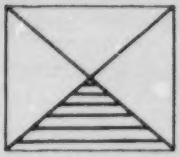
ESTIMATION

e) The time was 10 o'clock. We had ½ an hour of reading and 20 minutes of spelling. How many minutes would it be to 11 o'clock?

MEASUREMENT – TIME

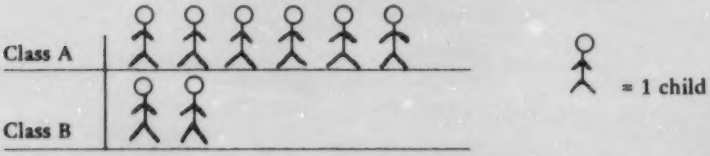
f) I had 19 cents. Dad gave me 22 cents. How much money do I have altogether?

ESTIMATION – MEASUREMENT – MONEY

g) 

(i) What fraction of the square is shaded?
(ii) What fraction of the square is not shaded?

SPATIAL KNOWLEDGE – SYMMETRY



(i) How many children in both clssses?
(ii) How many more in Class A than Class B?
(iii) Show Class C with 4 children in it

STATISTICS AND GRAPHS

OPERATIONS THROUGHOUT

2. *Unit Plan*

TOPIC TO BE INTRODUCED - Area of Circle - Stages 7/8

Step 1 - Method of Introduction
Activity on finding area of circle by dividing circle into sectors.

Related Topics
(a) Estimation and Approximation.
(b) Operations. Multiplication of fractions; whole numbers; decimals. 3 1/7 or 3.14.
(c) Number. Follow up on classification of number system.
(d) Measurement. Method of finding area of circle might involve measurement of diameters and circumferences of circles.
(e) Spatial Knowledge. Discussion of solids having circular bases.

Step 2. - Activity concerned with calculating areas and perimeters of circles found by group.

Related Topics
(a) Graphs.
(b) Estimation and Approximation.
(c) Operations. An activity such as this would provide ample opportunity for the teacher to evaluate a child's computational skills with whole numbers, vulgar and decimal fractions.
(d) Measurement.
(e) Spatial Knowledge. If surface areas of cone and cylinders have been explored as part of the above activity, then little further work will be necessary to assemble nets for these solids.
Rotation of circle about an axis could be discussed.

Step 3 - Discussion on best method for finding volume of cylinder. Reference could be made to generalisations arrived at in finding volumes of prisms.

Related Topics

(a) Measurement. Both areas and volume will come under discussion. Also liquid measure could be reinvestigated and applied to capacities of cylinders and cones.

(b) Operations. The work done in measurement should be sufficient for practice in four operations in number and fractions.

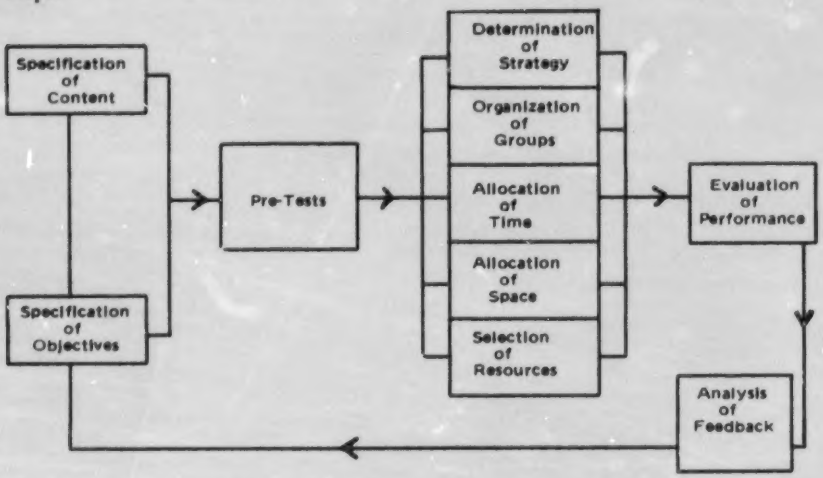
(c) Estimation and Approximation.

(d) Spatial Knowledge. See above steps.

NOTE: In all the above work, there seems to be ample opportunity for work in Number Sentences and Problem Solving, e.g. symbolic expression could involve the following - "If the radius of a circle is x units, find its area?" And reversibility of operations could be examined as a means of giving the child the ability to apply formulae in varied situations.

SYSTEMATIC APPROACH

The Mathematics Programme in the small school should be approached as it is in all schools - in a systematic way. This involves proceeding through the following steps.



AIMS

The general aims of the program are as follows:

1. *Computational Skills.* Children learn to use and practise computational skills in meaningful situations.
2. *Understanding.* Children understand clearly what they are doing particularly the principles involved.
3. *Creativity.* Children are encouraged to use a variety of solutions to problems.
4. *Attitude.* Children develop a positive approach to learning and derive enjoyment from it as a keystone to further learning.
5. *Communication.* Children communicate orally and in writing, the results of their research.
6. *Social Development.* Children learn to work cooperatively on some tasks, and independently on other problems.

ENTERING BEHAVIOURS

Instructional time should not be wasted on work that is already known. Similarly, there is no point in trying to teach new work when the foundations are improperly laid. Thus the entering behaviours of each child are of paramount importance. Determining these is usually based on end of year teacher made tests in any size of school. It is a fairly inexact art. Occasionally use is made of specific diagnostic tests.

Small schools have a distinct advantage in the area of entering behaviours. This is because of teacher continuity where one teacher usually is responsible for the one child for more than one year.

CONTENT

The program in mathematics is subject centered. Scope exists however for use to be made of children's interests. Some particular examples are:

- Children are playing with their wind-up cars (wind-up cars! how many years ago was this?) Utilize this interest to explore times and distances, leading to calculation of speed and involving, on the way, various calculations, graphing and so on.

- The fish are biting. The fishing expedition can be channeled into the mathematics program, e.g. sets of fish caught; total caught; total mass; average. (Please Note: grade oners will always outfish you).

- The fence is to be constructed; tennis court to be built and so on. Measurement, calculation and other activities can be employed here.

- Weather observations. These provide excellent raw data for statistical analysis.

STRATEGY

In the broad sense the strategies will range somewhere between exposition and discovery as depicted on the continuum.

Exposition ⟷ Discovery

This can be done in a number of ways -

- Semi programmed instruction. This can be prepared by the teacher on laminated cards, allowing answers to be written in water-base projection pen, erased, then re-used. An example of this is as follows -

TEACHERS USE ONLY
TWO UNIT DIVIDEND
SINGLE UNIT DIVISOR

.....

No remainder
Expansion of dividend only

.....

EXAMPLE:

$$\begin{aligned} 84 \div 4 &= (80 + 4) \div 4 \\ &= (80 \div 4) + (4 \div 4) \\ &= 20 + 1 \\ &= 21 \end{aligned}$$

COMPLETE THE FOLLOWING:

$45 \div 5 = (40 + 5) \div 5$
$= (40 \div 5) + (5 \div 5)$
$= \ldots\ldots + \ldots\ldots$
$= \ldots\ldots$

$36 \div 6 = (30 + 6) \div 6$
$= (\ldots \div \ldots + (\ldots \div \ldots)$
$= \ldots\ldots + \ldots\ldots$
$= \ldots\ldots$

$48 \div 8 = (\ldots + \ldots) \div \ldots$
$= (\ldots \div \ldots) + (\ldots \div \ldots)$
$= \ldots\ldots + \ldots\ldots$
$= \ldots\ldots$

TRY THESE:

$75 \div 5$

$36 \div 3$

$64 \div 4$

- the use of commercial mathematical kits.
- the use of activity cards of various types i.e. open, semi-open, closed.

Closed Cards

Length Card No. ☐

Find the height of the children in your group

Find the total height

Find the average height

Area Card No. ☐

Find the area of your classroom floor in square metres

Semi-closed Cards

Card No. ☐

Measure the diameter and circumference of 6 circles

Tabulate the results. Is there a relationship between d and c?

Card No. ☐

How far can you run in 1 minute

What is your time over 100 metres?

Open Cards

Card No. ☐

Examine the growth of equilateral triangles

	Side	Unit Δs	Line Segments
e.g. Δ	1	1	3
	2	4	9

Card No. ☐

Investigate a fixed area of 20 cm?

What regular and irregular figures are obtainable? Can you measure the perimeter each time?

- by using "assistant" teachers such as the tape recorder with appropriate audio-cued learning segments.

TIME

The time allocation for mathematics is approximately 5 hours per week. In small schools it is this author's view that it is better to have 1 hour per day (say 9.30 - 10.30) when all classes are working on mathematics than to spread the time or cross-timetable with other subjects.

The advantage here is that it allows easily for whole group teaching, cross-setting, revision and remediation.

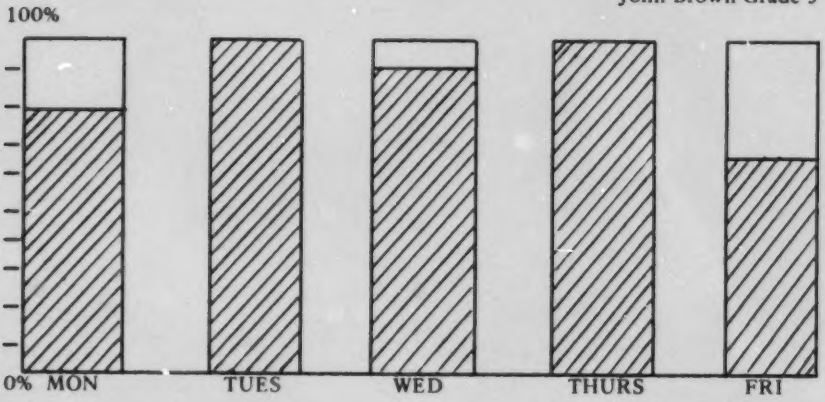
GROUPING

Whole School Incidental Instruction

The topic of percentage, for example, can be introduced in this manner during the morning check of spelling homework. Children can be provided with duplicated sheets for recording their weekly progress e.g. -

Spelling Results

John Brown Grade 3



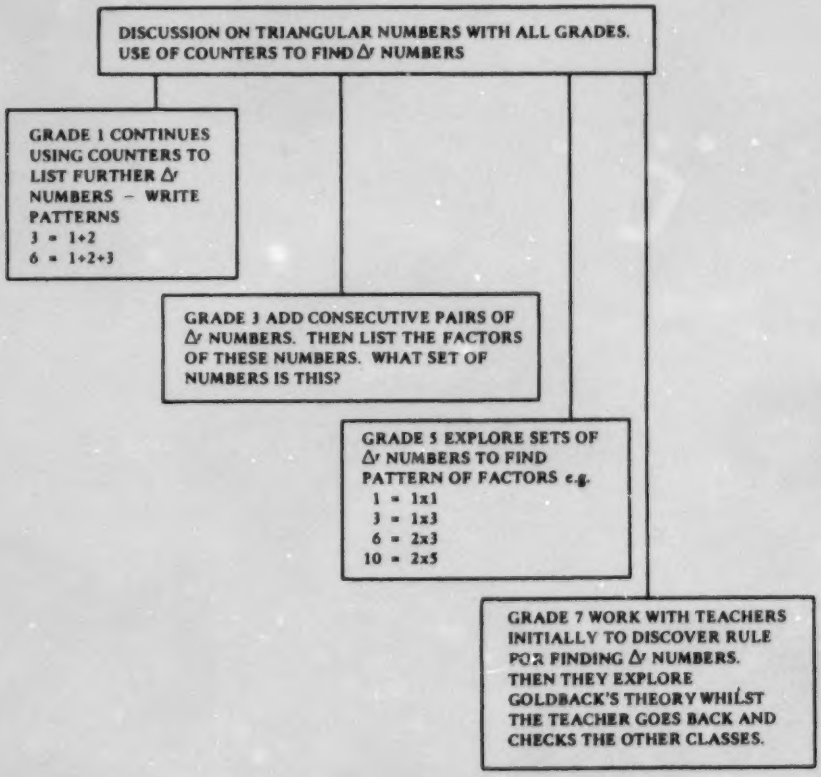
By varying the number of spelling for homework various fractional conversions can be done each day. The upper grades, having more spelling for revision, will have more difficult conversions to make.

Other topics can likewise be covered e.g. bar graphs for temperature recordings.

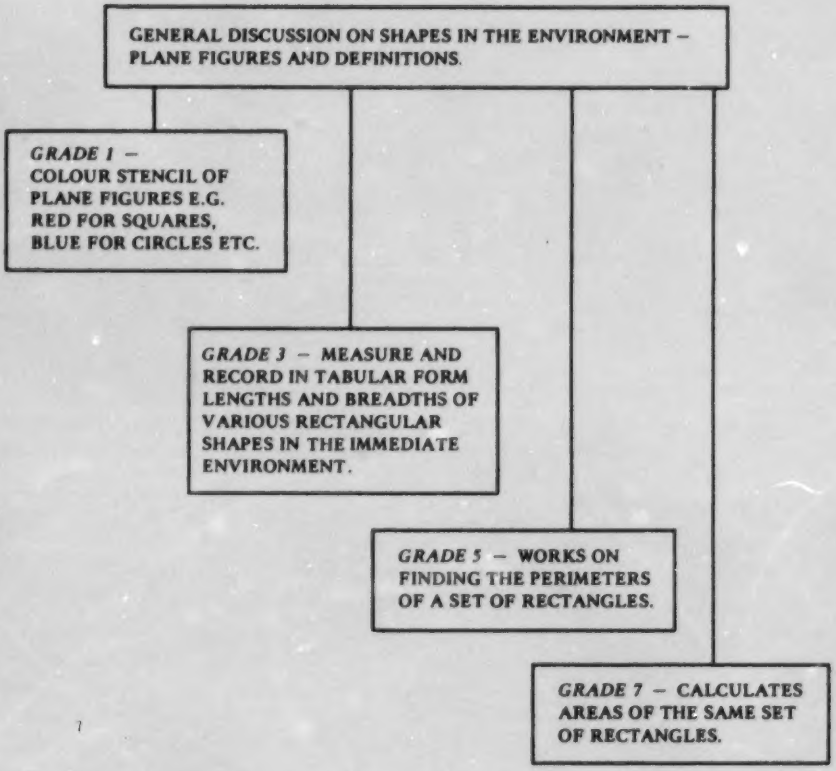
Whole School Instruction to a Number of Grades (Formal)

Some examples include:

(a) Number: Triangular Number

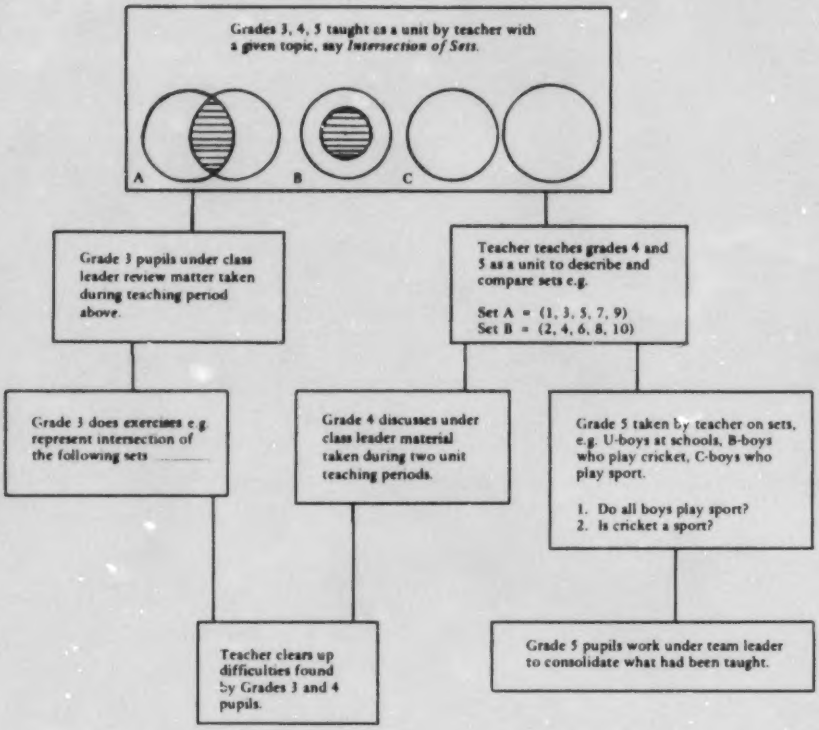


(b) Measurement



Part School Instruction to Two or Three Grades

(a) Sets: Grades 3, 4, 5.



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(b) Multiplication: Development of an algorism for multiplication

Grade 4: (a) 256 x 7 involving carrying (regrouping).
Grade 5: (b) 257 x 47 (a three-digit number multiplied by a two-digit number).

Both classes as a unit examine (a) -

256 x 7 = (200 + 50 + 6) X 7 = (200 x 7) + (50 x 7) + (6 x 7) etc.

In vertical expanded form:

256 = 200 + 50 + 6
x
7 7

1,400 + 350 + 42

= 1,000 + 400 + 300 + 50 + 40 + 2

In vertical form with partial products:

256	
x 7	
42	(6x7)
350	(50x7)
1400	(200x7)
1792	(256x7)

In groups at a blackboard, grade 4 pupils work similar examples e.g. 216 x 5; 489 x 9 etc.

Grade 5 pupils having had some revision of work taught in an earlier grade by joining with Grade 4 pupils on the work so far might now explore 256 x 47, thus -

$$
\begin{aligned}
256 \times 47 &= 256 \times (40 + 7) \\
&= 256 \times 40 + 256 \times 7 \\
&= 256 \quad\quad + 256 \\
&\quad\ \times 40 \quad\quad\ \times 7 \\
&\quad\ 10{,}240 \quad\quad 1{,}792
\end{aligned}
$$

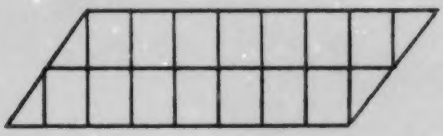
Pupils of Grade 5 could now work, in groups on the blackboard, similar examples before moving on, at future lessons, to a contracted form.

- Activity Work

  Group activity work forms an integral part of the program using activity cards (see earlier). The important point here (in this author's experience) is that children work in mixed ability groups. Often it is found that in this situation it is the less intellectual child who becomes the group leader.

- Individual Work

  Personal progress must be carefully nurtured by the teacher and use will be made of graded individual exercises, programmed cards, commercial kits and so on. Alertness to possibilities is called for. I recall an instance where the Grades 4 - 7 were exploring different shapes (and thus different perimeters) with 16 squares. My Grade 7 pupil soon moved on from irregular shapes, squares and rectangles. Using scissors he cut a parallelogram and to find the perimeter had to use a ruler for the oblique sides.



The exercise thus led into teaching on an individual basis the Theory of Pythagoras.

SPACE

Shortage of space is the perennial problem. If by chance there is a spare room or verandah, a mathematics workshop is recommended. A useful reference point for setting this up is the book by Seagrove and Ward, "Mathematics with a Purpose". When space is confined, a large flat box which can be sectionalized is useful for housing such items as trundle wheels, metric rules, tapes, in the length section, and other items required in the other sections such as mass, time and so on.

RESOURCES

In samll schools the need is greater to use learning resources. A *short* selection of those found useful for mathematics are:

(a) Carbon paper to provide children with a copy of the day's program.

(b) A full width chalkboard divided into 7 sections for the day's work. (New work marked with a red cross). Plentiful supply of portable chalkboards.

(c) Well prepared charts arranged for flip over presentation.

(d) Television.

(e) Tape Recorder with audio-cued learning tapes (teacher prepared). Individual ear plugs allow for private learning. Presses turned at right angles to the back wall provided carrels.

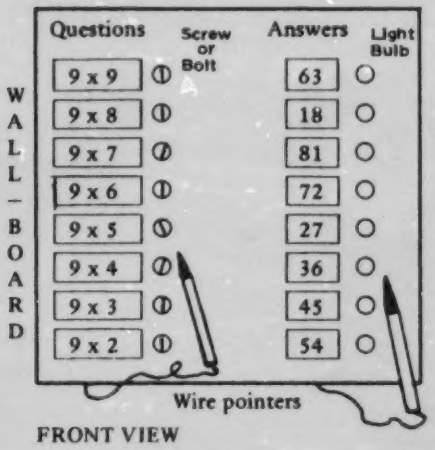
(f) The usual basic media. Counters, containers, rods, geo-boards and so on.

(g) A number line painted downstairs.

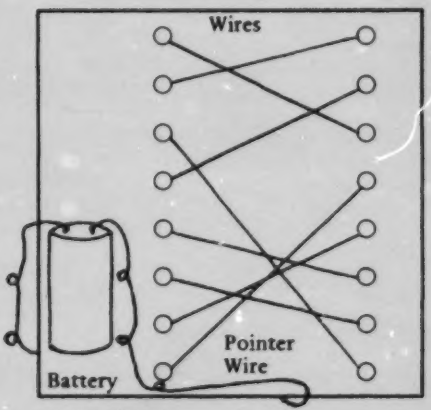
(h) An electrical quiz board for drill in the fundamental operations.

Construction details are as follows:

(Sample shown is check for 9 times table).



FRONT VIEW



REAR VIEW

Electrical quiz boards are surprisingly easy to construct. Materials required are some type of wallboard, labels or cards, wire, flashlight bulbs, a battery, small nuts, bolts, and washers.

Operations are written on the labels, and placed on one side of the wallboard. Each question has a bolt, under it secured by a washer and nut beneath the wallboard. Answers to the questions are randomly listed on the opposite side of the wallboard, with bulbs under them. Hidden wires go under the board and connect the bolts with the bulbs and battery (question and answer). The battery is fixed to the back of the board. Connecting wires stem from the battery poles, and serve as pointers. The tip of the insulated wire is removed on both pointers.

When the child touches one pointer to the bolt head under a question and the other pointer to the metallic contact of the bulb giving the correct answer, the circuit is completed and the light goes on signifying the correct response. Once the electrical system is established, many combinations of questions and answers my be used. A single bulb can be used if the circuit is wired in a parallel electricl system. A bell may easily be substituted for the bulb.

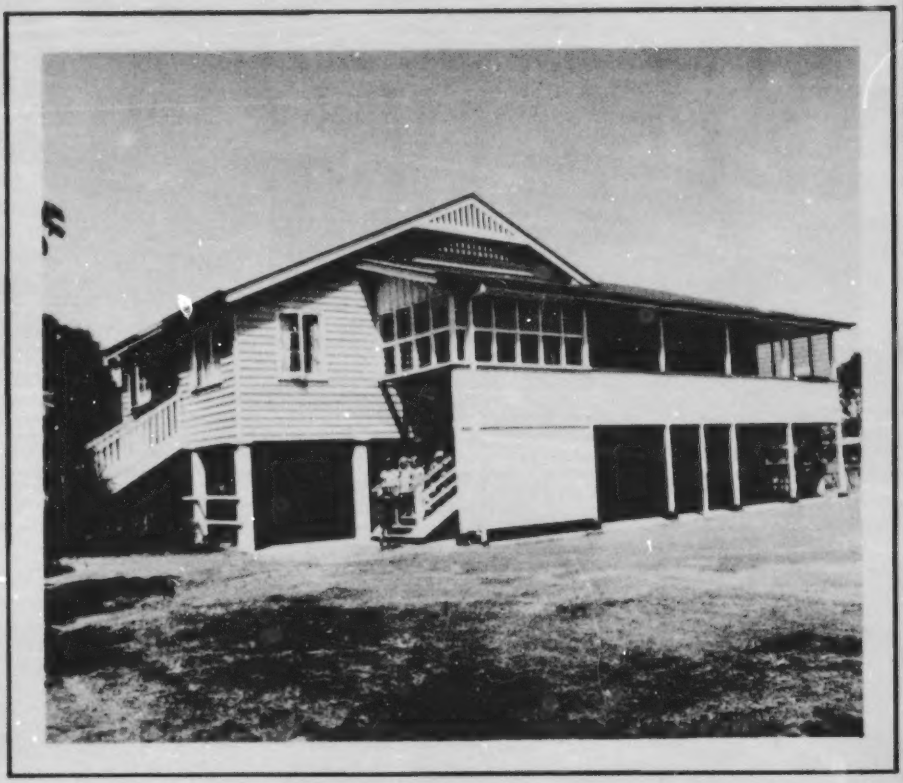
EVALUATION

As with entering behaviours, in the area of evaluation, the unique advantage is that the teacher has the children usually for longer than a 12 months period.

As the child is thus known well, the emphasis should be on the informal continuous evaluation rather than the summative type.

CONCLUSION

An appropriate comment with which to finish comes from the introduction to the program. For small schools as well as large schools, in general, the implication of the intended approach, for both pupils and teachers, may be summed up in one word - FLEXIBILITY.



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4

Social Studies

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Social Studies

At the outset, it ought to be stated, that in Queensland Primary Schools we do not have a social science syllabus. We have a social studies syllabus. Marsh and Print[1] in "The Social Sciences - Skills and Teaching Methods" have pointed out admirably in Chapter Seven, the basic differences between the two. Whilst they are advocates (apparently) of the social science approach, they do spend some time quoting Dufty[2] and others on setting out the differences between the social sciences and the social studies approach. The basic difference is that social studies tries to be a valuing approach to teaching some, or all, of the content associated with the "humanities" and the social sciences tries to deal in a "value free" way with the same content.

They quote Griffin[3] when he says that Social Science is, as an entity, still incohate and at best amorphous. Social Education's entry into the arena has further clouded the issue.

The small school teacher can only read as much as possible about the differences among these approaches, and then make up his mind as to which philosophy he will cleave.

To reiterate, the Queensland Syllabus does adopt a "citizenship" approach to teaching about MAN. The small school, probably more so than the large school in a metropolitan area, has a greater capacity for teaching about attitudes and values relating to citizenship - whatever these are agreed to be, by citizenship advocates.

Assuming that there are a number of basic philosophical stances relevant to subject matter and content relevant to the humanities, i.e. what IS and what OUGHT man to be, there are probably some characteristics which a good? social studies programme ought to have and the small school is better situated to provide these.

They might be listed as

using subject matter drawn from a wide range of sources.
educating for international understanding (difficult in the sometimes paroachial background of some small schools).
informality (a bonus in a small school).
use of multiple resources (more difficult)
in depth studies (see flexibility later).
out of school application of learnings i.e. relevance.
thinking as a major emphasis.

*What's good? author

pluralism (again difficult given some small school pupil/parent attitudes).
clarification of values.
social reality (this is a difficult balance to obtain where ideals have to be taught side by side with this "reality").
concern.
searching for options in texts, materials and teaching strategies (see flexibility later)

and reward for pupil behaviour that satisfies your objectives (be they social studies objectives, which the syllabus requires among others, or social science ones).

The other aspect that is crucial to small schools' and any schools' social studies programme is reading. As is mentioned later, there is a very close tie among social studies, maths, art and craft, music, physical education and so on but reading, which one must assume is a language art as well as "English", is central to social studies education.

If the small school teacher looks at the resources used in social studies, reading is central to them all. Social studies has its books, its topics, its picture captions. It has a vocabulary often all of its own which ties in with concept development.

Directed study, previewing material, word problems, and so on are some of the essential parts of the social studies. The (old) mini library, old text books, periodicals, magazines, trade books, fiction, biographies, histories, poems, songs, paperbacks, selected newspapers etc. are all sources of reading for the social studies. Correlation of social studies and the language arts is one way in which the small schools teacher can open up a way of achieving the development of understandings, attitudes and skills in more than one primary school syllabus area at the same time.

In attempting to assist practising teachers to cope with the teaching of social studies in small schools let us quote from the current syllabus:

> *"The Social Studies Curriculum is structured as a spiral curriculum, so that certain concepts, grasped with varying degrees of understanding according to the abilities of the children, are presented in increasing degrees of abstraction in successive grades."*[4]

Later,[5]

> *"The curriculum has many suggestions and is intended to be flexible rather than prescriptive; teachers are free to select or substitute material – providing the development of the concept occurs."*[5]

Obviously, the key to teaching social studies in the small school is FLEXIBILITY.

This flexibility can manifest itself in a number of areas in the social studies syllabus in Queensland. The main ones are:

THE TEACHER
CONTENT
TIME ALLOCATIONS
ROOM ENVIRONMENTS
RESOURCES
TEACHING STRATEGIES including GROUP WORK
and APPROACHES TO SOCIAL STUDIES INSTRUCTION
UNIT DEVELOPMENT
SKILL & ATTITUDE DEVELOPMENT
EVALUATION PROCEDURES & PROCESSES.

FLEXIBILITY AND THE TEACHER

One old adage says "the proof of the pudding is in the eating". This is as true in teaching social studies as in other fields. Jarolimek[6] claims that imaginative, creative, research-oriented teaching can only occur when teachers are given a measure of freedon in their teaching.

The small school teacher probably needs these characteristics more than his city counterpart. It will be the use of imagination and creativity which will enable him to overcome some of the problems of teaching social studies in the small school. Certainly a research basis for the teaching of social studies should assist in freeing the teacher for face to face confrontations in other subject areas. The problem with this, is, of course, the availability of resources. There is no recipe for producing an edible "social studies pudding". However, if the small school teacher can give his pupils enough practice in those academic skills related to research and has enough resources or obtains enough resources, then half the small schools social studies battle is over, particularly in the upper and middle grades. The lower grades can be a different "kettle of fish".

Suffice it to say that the small school teacher wll have to "cut much of his social

studies cloth" to suit the school, the class, his colleagues and so on. The syllabus however, allows for this and even encourages it.

FLEXIBILITY AND CONTENT

The syllabus is no longer an amalgamation of history, geography and civics. It is multidisciplinary in its basis and draws upon all of the humanities as its base. It includes elements from

HISTORY
GEOGRAPHY
POLITICAL SCIENCE
SOCIOLOGY
ANTHROPOLOGY
SOCIAL PSYCHOLOGY
PHILOSOPHY
RELIGION
ECONOMICS
CARTOGRAPHY

and the like.

The small school teacher will know what his background is in these disciplines. This is the key to flexibility in terms of content. A key concept such as resources for example, can be taught or researched as easily from a geographical as from an economics base or if the teacher's strength lies in sociology he might like to look at a main idea based on resources from a social ultilization point of view. Remember that the syllabus tacitly says - You can teach what you like when you like provided the development of the concept occurs. (Finding out whether concepts have been formed is another story).

It would be advantageous for teachers in small schools to look again at page 9 of the Guide for the Social Studies Teachers Book Two[7] where the key concepts are listed. Using it as a starter, an enterprising teacher could produce his own syllabus using his own content background and still develop those key concepts over the 7 years that a child is at school. Remember too, that pupils won't stop conceptualizing after they leave primary school.

Concept clusters of your own could also be developed by contiguity of association exercises and thus content other than that contained in the syllabus guides could be used.

So, with the key concepts in mind, with your own developed concept clusters, your own knowledge of your content background and your knowledge of the resources available at your school, it should be possible to be flexible enough vis à vis content to come up with viable alternatives to the set syllabus.

FLEXIBILITY AND TIME ALLOCATION

"There is little if any, reason to claim that any part of the day is best for teaching social studies."[8] Where it may be placed in the daily programme is a matter of teacher preference. For the small school, this means that the teacher may time slot social studies in at any time of the day - ultimate flexibility as far as a time table is concerned if the school day is so structured. Just before or after lunch appear to be the most popular times. Depending on the nature of your programme and the age of the children, anywhere between 15 minutes and an hour could be deemed reasonable time.

In the middle and upper grades, variety of time slotting patterns could be advantageous.

Social studies should, however, be taught systematically and in a regular way.

The other advantage of social studies to the small school teacher is that it lends itself to correlation and integration with other subjects. "Life in the hot wet lands" can be combined with music for songs and dance, with language arts for stories and drama, with art for painting and drawing, with science for soils and conservation and so on. Many geographical elements of the syllabus also lend themselves to correlation with mathematics e.g. the graticule and geometry in the upper grades.

In short, by judicious time allocation and correlation and/or integration of subject areas, much of the time allocation problems in the small school can be overcome.

FLEXIBILITY AND ROOM ENVIRONMENTS

Learning surroundings too, should be flexible in order to accommodate individual learning styles, capabilities and motivation. In the small school, for example, whole class teaching can be kept to a minimum. Portable screens can assist in no small way to provide for individual learning areas, group research areas, dispiays, learning centres, and listening posts. Movable furniture ought to be standard in most small schools these days. In this way, the classroom environment can both physically and visibly contribute to the learning environment. There is a further spin off in the creation of a non-hostile, non-stress, non-aggresive classroom climate which in turn can assist in those unknowns in social studies, the development of desirable attitudes and values.

Room environments inevitably involve *RESOURCES* of some kind.

Not all pupils learn in the same way and different media relate in different ways to different people.

Thus it is through flexibility in the range of resources available that the small school teacher may overcome many of the mechanical problems encountered in low teacher/high class number ratio situations. A formula often quoted relative to Resources is:

$$TDC \propto \frac{1}{RA} \quad \text{where}$$

TDC = Teacher dominated classes
RA = Resources available.

The small school teacher must do everything in his power to ensure that an adequate range of aids is on hand for the reverse of the above formula is also true:

$$RA \propto P_4I$$

where RA = Resources available
P_4I = Potential for Inquiry

Inquiry teaching requires that resources be available. If they are, then one of the major problems of the small school teacher has been overcome - that of not being able to be in two places at the one time teaching two or more classes.

To refresh your memory, here is a suggested list of resources a social studies teacher can buy, collect, beg or borrow.

Text books (still not a rude word provided they are not the only one used)
Trade books
Encyclopaedias
Filmstrips
Films (borrowed usually)
Pictures
Charts
Study prints
Maps - large
medium
& small Scale*
Air photographs (particularly of local area); Mosaics are good.

Globes
Wall maps
Overhead transparencies - commercial and home made
Audio Tapes
Television
Radio
Learning kits and packets
Simulation games
Community resources - people
museum
libraries etc.
Newspapers
Magazines
Classroom periodicals
Pamphlets
Reference books.

*(let's not only use atlases for maps)

No one would expect the teacher to be using all of these all of the time, nevertheless a judicious choice of these will free the small school teacher from much out in front of the class performances. The necessary skills to use these resources must be taught to pupils. Practice over periods of time will allow for improvement.

Learning activities are another way of providing variety, flexibility and motivation in the small schools social studies programme.

Some activites would require teacher supervision which reduces their value to the teacher with the two place/one person problem. However, direct supervision may not always be required and many of these activities could well assist in providing flexibility in teaching strategies in the social studies in the small school.

Generally speaking social studies teaching involves

1. Exposition
2. Inquiry
3. Activity
4. Demonstration.

and above all 5. Questioning techniques.

Exposition and inquiry demand most from the teacher and perhaps least from the pupils. Inquiry and activity involve maximum pupil involvement and themes which occur at the time of the inquiry or activity can require minimal teacher supervision. Inquiry and activity *do* involve the need for lead into and lead out of work by the

teacher and some supervision is still necessary, but they do free the teacher from the class front. Small school teachers should expect to be using more inquiry and activity teaching than exposition and demonstration but not delete the latter altogether, provided the necessary resources are available.

The ideal would require a judicious mix of the types referred to and in the lower grades activities probably will outnumber inquiries.

Fairly obviously, the use of monitors in group work situations also relieves the teacher from direct supervision of classes. It does take some time, however, for a class to learn the necessary group work skills and these would involve fairly close teacher supervision in the early stages. Once having been taught however, group skills associated with group work should provide for very good learning environments for pupils provided the resources necessary are available.

The same can be said for strategies involving inquiry. The necessary skills have to be taught before the strategy can be employed. One would also hope for an improvement of all the skills as a pupil progresses through the school.

Similarly, monitoring which ties up with the social skill of leadership, can be developed progressively. It probably is wise to use your best monitors relative to the importance placed on the work in hand. Nevertheless, all pupils should be given the opportunity to exercise leadership skills.

FLEXIBILITY AND APPROACHES TO SOCIAL STUDIES

Instruction and Unit Development

Approaches to teaching the Social Studies can be:

highly structured - this involves a text book and advanced teacher planning.
moderately structured - not quite so great a reliance on a text but still uses books.
informal and/or pupil centred - the open education approach. This involves joint teacher/pupil programming and uses pupil interests, needs etc. background.

It would seem, on the surface, that the latter approach would be the best for the teacher in a small school. However, structuring of approaches does not, normally, take into account work face versus non work face teacher commitment. (Now I know that work face commitment might mean the spectrum of "being there" through to being there and being "expository and demonstrative" etc) so one might

like to think that for the teacher in the small school, *ANY* (ultimate flexibility wise) approach could be utilized provided that the teacher accepted that each approach produces dilemmas relative to teacher presence (i.e. "being there" *not* - necessarily charisma etc.).

Notwithstanding all this, those approaches which enable maximum pupil involvement in a work face / interaction situation and minimum teacher involvement (note *NOT* input) in the situation would seem to be the optimum for the small school when the teacher wishes to be elsewhere. He may want that flexibility in any other subject area if he needs to be "in front of" a social studies class or classes.

The writer is not sure, nor convinced that any of the approaches put forward by social studies pundits is necessarily better than any other for use in small schools. The writer would like to think that flexibility related to an "ultimate mix" of these techniques would be best. We are really back to "cut your cloth to suit the pattern" - "the proof of the pudding is in the eating" again - and it's not sure that there are patterns or recipes that will provide instant answers. It is thought that teacher flexibility is the most important aspect.

Some recent studies in military training even indicate that "new situations may demand unknown capacities".[9] Perhaps this is the case with small schools. It would seem that teachers in small schools have to be innovative, not for the sake of being innovative, but for the sake of survival. Their city counterparts may be concerned about survival but it could be survival of a different kind.

In short, again, the purposes of your teaching which relate to goals and which relate to Sir Fred Clarke's[10] "Quo Warranto"* ultimately influence the strategies used.

One must confess that quite often teachers in small schools are much less interested in the idealistic requirements of "by what warrant do you act?" as by "how do I keep them gainfully employed in whatever time of the day I have chosen for social studies for year what."

But these are important interrelated questions and the degree of flexibility exercised by teachers will impinge upon both ultimate Quo Warranto and ultimate pragmatism - whatever they be in social studies.

Here I do not wish to enter into the ultimate debate as to the nature of the social studies for I assume (rightly?) that practising teachers have formed their basic premises vis à vis these already.

In short -
Do what you will - provided that you have thought it out carefully and young children are not "suffered to come unto you" and find that yours is not "the kingdom of Heavenly Social Studies".

*Quo Warranto = (loosely) by what authority do you do this

As far as flexibility and unit developments are concerned these are closely linked with content and key concepts and the like. Young inexperienced teachers probably need to prepare in depth (i.e. to over prepare), while older teachers perhaps need to over prepare in terms of areas not readily known to them.

This does have some implication for the teacher in small schools. Perhaps (see the multidisciplinary base of the syllabus) you need to assess your capacity relative to the particular unit. Do you have the necessary background information? If not, what content could you substitute? What year are you preparing for? Can you combine this content with another year's content? What other content could you use and still develop and teach the key concepts and associated clusters of concepts? Are your resources adequate - do your main ideas and content need to be modified? and so on.

Your unit development is related to your ultimate flexibility which is related to your content background, your confidence, your professional expertise and all the things (resources etc.) you have available to you. Be daring, be flexible, be prepared to try new content and new ways ensuring that the key concepts are being dealt with in some meaningful way (and there is a reasonable argument to suggest that the key concepts could be varied).

Your teaching strategies on implementing the unit of course, relate to whether Piaget or Bruner, or Taba or Bloom or whomsoever, have the ultimate explanation for the thinking/learning process and you do have to satisfy those other demands from parents, principals, inspectors, the government, the union, other teachers and possibly college of advanced education theorists.

In this conflict type situation, the exercise of common sense is probably the best answer. Anyway, Professor Kyle said "the human mind is active".[11] The human mind will probably conceptualize despite your efforts.

FLEXIBILITY RELATED TO ATTITUDES AND VALUES

This area is a hard one to deal with. The Queensland syllabus does lay down certain values and attitudes which it deems desirable to be developed in Queensland primary students (see the "Summaries of Outcomes" at the end of each Unit).

The small school more than any other, has the potential for developing those "attitudes and values" which may be those general attitudes and values embraced by our society.

From the point of view of socializing pupils into the life of our society, the small school teacher has a greater opportunity than, perhaps, our staff teachers in large metropolitan areas.

Values with young children can be taught in very direct ways. For the others, values can be transmitted because they - the pupils, are part of a small, compact, microcosmic society/community.

It is through daily life of the small school as distinct from class life that the small schools teacher can "teach"? such values as freedom, human dignity - if such are the kinds of values that our society wishes to teach in our (see p.67 Jarolimek[12]) community. A comparison with the various unit outcomes would confirm this.

It is probably here that the small schools teacher can, if committed, make a greater contribution to the development of those socializing values and attitudes agreed to by most of the societal institutions in our community, as being of worth.

This does not involve any problems relative to flexibility except flexibility vis à vis personal philosophy.

FLEXIBILITY RELATED TO SKILLS

Social studies skills are both social and academic. The social skills are tied up with attitudes and values and we have already dealt with them, (albeit unsatisfactory for some). The development of academic skills are tremendously important for the teacher in small schools.

If they are not taught systematically and in many instances prior to academic demands placed upon pupils then the whole of the small schools flexibility spectrum can be lost.

Unless the various inquiry, group, mapping and the like, skills are taught and developed systematically, the small schools teacher is going to find himself more and more committed to structured approaches and this detracts from the physical flexibility of the teacher in a work face sense.

Thus, the teacher in the small school has to "take time off" to teach necessary research skills to large groups before embarking on the delicately balanced small schools daily programme where he is teaching to one group (class) whilst all others are gainfully employed in inquiry, research, activities or what have you.

This might mean, flexibility-wise, that a teacher, arriving at a small school would assess the inquiry skills of the various grades in the school and decide that before embarking on any social studies teaching he must teach this/that or the other skills - because until the pupils are adequately "armed" (skills are the tools/weapons of learning) they cannot be sent "to engage" in activities whilst the small schools teacher is handling his one class in one place whilst others are "gainfully employed" elsewhere.

FLEXIBILITY IN EVALUATION PROCESS AND PROCEDURES

One great cry in social studies in the realm of evaluation has been not only relevance but - the exercise of judgement applied to the measuring device.

The small school, with its more intimate teacher/class climate/atmosphere should lend itself to the better exercise of judgement. You should know your pupils better and therefore should be able to place any evaluative measuring devise in better perspective.

Accountability is one of the great pressures and cries of our citizens today relative to teachers, whether it be in small schools and the social studies or not. The small school teacher ought to be able, better than some of his city counterparts, to convey information concerning pupil progress to parents in a more valid and reliable way because he ought to know the pupil better. This is not to claim, of course, that many metropolitan teachers do not know their classes well.

The other part of the evaluation spectrum for the small school teacher is this - lower grades need more oral testing, upper grades can use more written and general testing.

A mix of formal/informal, oral/written, teacher-made/standardized testing which will suit your school, your district, yourself is going to make your task so much easier.

The small schools teacher may be the dinosaur of modern education in Queensland, but he does need extra skills, does need all the support the community at large and the community of teachers can give.

Being flexible, being patient, knowing where he is going in the long term as well as in the short should ensure that day to day teaching of the social studies will be better.

In addition, don't neglect your continuing professional growth in social studies. Read more books on the topic than you are. Join a professional association.

Develop a sense of professional identity and remember that the best teaching methods for you must be the ones that work for you.

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5

Science

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Science

" 'Sir' is discovered in his classroom. He is standing among the tables at which are working the twenty-five or so five to thirteen year olds who make up his school. He is talking to two girls.

Girls: *But Sir, we couldn't count every single clover flower in the field because it's so big, and it would take so long that when we'd finish it would be all different.*

'Sir': *Well, do you have to know exactly how many clover flowers there are?*

Girls: *Not really. It was just that when John and David measured the area of the field they said there were thousands of clover flowers and Susan and I said there weren't, and they said, "How many, then?" so we thought we'd find out.*

'Sir': *Isn't it like when you found out how many steps you took to the kilometre? You didn't walk a whole kilometre.*

Girls: *No, Sir, We found out how many steps for fifty metres, and did it three times to be fair. I know! Couldn't we count the clover flowers in a square metre or something and then multiply up? David and John know how many square metres are in the field.*

'Sir': *Well you'd still have to be fair.*

Girls: *We could do it, say, in ten different places all over the field. Can we have a try and see what it comes out like? (The two girls go off to do it).*

('Sir' turns to George and Robert who are hammering at the workbench).

'Sir': *What's this you're making?*

Boys: *Well, we finished the Story Bridge so we thought we'd make a model of a bowstring bridge and test it to see how much*

it would stand. You see they're both suspension bridges but they're different.

'Sir': *That's a good idea. I think that the library has a book on bridges with pictures of bowstring bridges in it. You might like to find it. (They go out to the library).*

(On the table by the window Frank and Julia are working with batteries and other apparatus).

Frank and Julia: *Please, Sir, we can't make our electric bell work. What's wrong with it?*

'Sir': *(looking at it) I'm afraid I can't see at once. Suppose you ask Richard; he's the expert on these things.*

('Sir' goes to the next table, and Jean looks up from her writing).

Jean: *Please, Sir, we've nearly finished the work-card on pendulums you gave us; and it says, "Can you find a way to make a pendulum draw the path of its own swing on a sheet of paper?" Well Sir, we think we can do it. Can we try?*

'Sir': *Yes, if you think you can manage it. Do you want to tell me about it?*

Jean: *We think we can do it with what we've got and what's in the junk box. We could bring what else we need from home. And please Sir, we'd rather just show you when we've done it.*

'Sir': *Alright then, you go ahead and try.*

(Sir turns to Willie who has come up with a paper in his hand).

Willie: *Please, Sir, I've finished that poem about the Barnacle Goose, you know, the one that started:*

The Barnacle Goose
Is out on the loose.
No trouble has he,
He's free.

I did it at home. (He hands him the paper).

'Sir': *(Reading it) That's fine. It's a happy poem and I like it. I think the class will like it too. Will you make a copy for us, and put it up on the wall with the others about our visit to the farm? We've got quite a collection now.*

('Sir' stops beside Peter, who has his head down and his tongue out writing with grim concentration).

'Sir': *Why, Peter, that's a lot of writing for you! I've never seen you do so much before. What's it about?*

Peter: *It was that photograph of the sheep you let me take with your camera. I never took a photograph before. And I'm developing it and printing it. I didn't ever think I could do that, even if you helped me. I'm writing about how I did it. And if I put the photograph with it, could I put it on the wall?*

'Sir': *Certainly you could. That's the first long piece of writing you've ever done. And it's good. (Peter glows diffidently).*

('Sir' moves on to the book-corner where he can see Kevin reading).

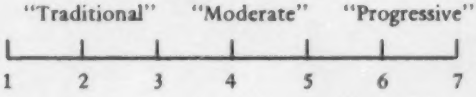
'Sir': *Kevin, you said that you and the Weather Study Group were going to make some observations on different kinds of clouds. Have you finished doing it?"* [1]

What makes 'Sir's' classroom so different? This general question should no doubt be the subject of sub-division- and it will be, but only after a little clarification of what we may aim to do in the next half hour or so.

Basically I hope to be able to illustrate a number of alternatives for the *preparation*, *implementation* and *evaluation* of science in small schools. The illustration of these alternatives (rather than a *single* proposal) is prompted by:

a belief that there is no one answer for all teachers of science.
a belief that it is better for you to decide what is best for you, rather than for me to decide.
the knowledge that all of you possess teaching styles and philosophies which could be placed at any point along the "traditional" _____ "progressive" continuum of teaching styles.

What we'll do then is to have a look at the planning, implementing and evaluating of science that may suit teaching styles across the spectrum - from "traditional" to progressive". On the seven point scale below, the three alternatives chosen for illustration would probably be best aligned with numerals 2, 4 and 6. In describing the teaching styles as being somewhere between "traditional" and "progressive", there has been no intention to suggest that any one style is better or worse than any other. The important point is to realize that you have a teaching style and, if you've really done a lot of thinking about it, that style is yours because it's what suits your personality, beliefs, philosophies and abilities - in fact, it is merely a reflection of these things. There should be no misinterpretation either of the terms "traditional" and "progressive" by relating them to approaches to science, specifically - they are used here to apply to general teaching styles only.



CONCEPT v PROCESS

Primary science educators in Queensland, at this very moment, can not agree on the best way to approach the teaching of science. The more familiar approach (1966 Science Syllabus) is one which focuses on concepts to be discovered and/or learned - e.g.,"Most living things are either plants or animals and they differ in many ways". While the Queensland Education Department's 1966 Syllabus was planned in this framework, it also emphasized that the learning was in the doing, not in the writing down of facts gleaned from a text or a teacher's mouth. The "processes" then,were also recognized as important.

These processes or skills, (including observing, recording, experimenting, hypothesizing, inferring - and many others) are seen by some as being the saviour of scientific learning in the primary school. Process supporters maintain that knowledge comes from the involvement in actually carrying through an experiment from hypothesis to conclusion and that the process takes pride of place over the actual outcome - though not condemning it as unimportant. Those believing a conceptual science program would be of more benefit say:

> *"To develop a lesson around processes (alone) without regard to products of thought and experience seems to lack direction. That is, giving children experience without placing that experience in a meaningful framework is giving him experience without regard to learning"* - Paul Bradwain.

It is difficult, though, to conceive how, in any learning situation, the processes involved can be completely divorced from the outcome (concept).

I mention the Concept - Process battle here merely to introduce my contention that the concept-oriented science program is perhaps more suited to the "traditional" teacher whereas the process-oriented science program is more suited to the "progressive" teacher. Undoubtedly the process program requires more doing, more grouping, more inter-relating - and more mess; characteristics more often associated with "progressive" teachers.

The alternatives provided below are not intended to emphasize my contention, in fact, a de-emphasis is more likely to be the outcome.

Alternative T (for the teacher believed to be closer to the lefthand end of the continuum - "traditional").

Planning:

Depending on children's interests, abilities, and previous experience as well as resources available and grade numbers, planning of the science curriculum could begin by grouping years one to three, years four and five, and years six and seven into three workable units.

The concept unit plan illustrated,[2] outlines what outcome is to be learned, what resources are available, some teaching strategies that could be implemented, some useful references and also, allows for evaluative remarks to be made. The strategies and resources used could be alternated so that while the same children are "taught" the same concept the following year, the method of arriving at the concept is completely different.

CONCEPT 3 LOWER SCHOOL

Seasonal Changes May Occur

RESOURCES

Aquarium, Vivarium, Nature Trails, Gardens, Bee Hive, Ant Farm, Filmstrips, Magazines and Charts

SOME STRATEGIES

1. Observation Posts
   - Trees, Plants
   - Ponds, Vivariums
2. Focus Finds
   - Find something which changes slowly
   - Find something which has the potential for change
3. SC5/13 - Activities from references below
4. Correlate - Social Studies Gr. 1 Unit 7
   Gr. 2 Unit 7

SOME REFERENCES

SCIENCE 5/13
Trees p. 3
Change (1 & 2) P. 14, 15
Time, p. 35

EVALUATION

Implementing:

Though obviously concept oriented, there is no reason why children should not be involved directly in finding out things related to the concept. Though the concept may be the prime objective, the method of getting to that concept will determine the completeness of the understanding and knowledge about it.

In the unit plan illustrated, for instance, the use of observation posts (where small groups of children choose a number of points of interest to be observed throughout the whole year) requires children to observe, record, report, collate, hypothesize, compare and conclude in order that the concept, "Seasonal changes may occur", is realized.

As is often the case, social studies units may quite easily be correlated to work being done in science, so adding greater meaning to the learning experience.

Evaluating:

No matter what alternative we discuss, the methods of evaluation should be:

varied;
related directly to your stated objectives;
discussed with the children;
brief and helpful, to both teacher and pupil.

With concepts the prime objective with the Alternative T, teacher evaluation is relatively simple. Because the objectives are so clear, written objective tests (short answer, true or false, short descriptions) are probably the most widely used and most efficient, but tend to test short-term memory rather than understanding and possible application and relation of knowledge to other areas. Ask the children to write an essay or (for lower levels) picture story to show they understand the basic concepts and knowledge attained.

Alternative M (for the moderate teacher, who likes a mixture)

Planning:

Again working groups could receive the same consideration as Alternative T with probably three strands - lower, middle and upper - being planned.[3]

Current Curriculum Planning could receive similar treatment to the example illustrated.

'Earth's surface and Conservation', Main Ideas, Focus Activities, References, Skills & Evaluation associated with studies on water in the upper school' - and would pinpoint both the skills of processes to be experienced as well as the concept or main idea to be learned.

EARTH'S STRUCTURE AND CONSERVATION — UPPER SCHOOL

REFERENCES	MAIN IDEAS FOCUS ACTIVITIES	SKILLS	EVALUATION
Science Magic - T. Johnston 540 P. 21, 25, 49, 60 Sc. 5/13 Change St. 1 & 2 P. 12, 50 S.T.E.M. Book 1 (orange) P. 128 Let's Look at Snow - Ginn Reading Series 551.5 Basic Science Series - Water 551.4 Hot as an Ice Cube - P. Balestrino 536 SC. 5/13 Change ST. 1 & 2 P. 43 Water - R.H. Fice 532 Galt Science Exper. Cards Elementary Science Experiments Cards 1 - 10 AV 53 372.3	A. *Water* (a) *Water has three states.* 1. Investigate ice water and steam by having the children record temperatures & record the changes. e.g. the time it takes an ice cube to melt and the temperature at 60 second intervals; e.g. different surfaces cooled at different temperatures to collect water droplets from steam. 2. Discuss and experiment the applications of evaporation at home. Record and graph the drying times of soil, hankies and leaves to dry out. 3. Discuss how matter changes with temperature. Apply knowledge of solid, liquid and gas to kitchen cooking changes, e.g. melting butter, cooking popcorn, heating sugar. Children could record changes - solid + heat solid solid + heat liquid Children should realise that heat is energy and can do work. 4. Apply this knowledge of temperature and change of water state to changes in the weather. Discuss how water does not need a great change in temperature to change state and that's why we have quick changes in the weather. Relate to the experiments where children measured the critical temperatures of each state. 5. Discuss what each water state looks - feels - smells like. Examine how the water stirs, shakes, pours. Describe what water looks like. (b) *Water exerts pressure.* 1. Show that water exerts pressure by measuring the weight of a stone attached to a spring balance out of water and in water. Children record the change to infer that water must push the stone upwards. Record children's experiences in caption form.	Observing Experimenting Measuring Recording Discussing Observing Recalling Experiences & recording	

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An overview of the concepts and processes could be used, as illustrated,[4] and would provide the necessary opportunity to see the year's planned work as a whole, rather than as a conglomeration of separate, seemingly unconnected units. It would also enable similar experiences planned for different groups to be enjoyed in unison.

OVERVIEW – EARTH'S SURFACE AND CONSERVATION

LOWER SCHOOL	MIDDLE SCHOOL	UPPER SCHOOL
A. *ROCKS & SOILS* (a) Rocks, soils, gravel, clay, dust, mud, stones are what we walk on. (b) Rocks and soils make up the Earth's surface. (c) Soils have moisture in them that is needed by plants and animals. B. *WATER* There are oceans that have many different plants and animals. C. *WEATHER* (a) We can see changes in our weather. (b) Clouds, wind, rain and temperature cause changes in our weather.	A. *EARTH'S CRUST* (a) Earth's surface consists of many landforms. (b) Earth's surface is still changing. (c) Man's actions have been destructive. B. *MATTER* (a) Matter has three states – solid, liquid, gas. (b) Matter changes its state depending on its temperature. C. *ROCKS & SOILS* Rocks and soils are different and have many uses. D. WATER & AIR (a) Water and air are necessary living things. (b) Water is found in air, soil and living things. (c) Rainfall is not distributed evenly in Australia. (d) Polluted water causes sickness and death. (e) Water can be cleaned by filtering.	A. *ROCKS & SOILS* (a) Soils are different. (b) Rocks are different. (c) Different crops are grown in different soils. (d) Soils can be improved by filling and fertilizing. (e) Soils need to be conserved. B. *WATER* (a) Water has three states. (b) Water exerts pressure. (c) Some objects float in water. (d) Some liquids are denser than water. (e) Some things dissolve in water. (f) Water is an eroding agent. (g) The solubility of some substances increases with pressure and density. (h) Water should be conserved. C. *WEATHER* (a) The weather patterns over a period of time make a climate. (b) The water cycle shows evaporation and condensation. D. *AIR* (a) Air occupies space. It can resist motion and has weight. (b) Weathering and erosion by wind are continually changing the surface of the Earth. (c) Man pollutes the air. (d) Air pressure is affected by altitude. E. *EARTH STRUCTURE AND COMPOSITION* (a) Mountains and hills are formed by folding and faulting of rock strata. (b) Mountains affect rainfall and temperature. (c) Rocks differ according to their formation. (d) Rocks contain minerals.

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The conceptual overview is intended to show not one years possible work but enough alternative main ideas for use in consecutive years by the same group of children, as when the year 4 children in the middle school group (years 4 and 5) would remain in the same group for two years.

Implementing and Evaluation:

There can be no doubt that while all children have "individual differences", they also have "collective similarities". The small school situation necessitates planning to the "collective similarities" yet, because of its more personal atmosphere, allows more readily the skilful manipulation of individuals within a group - enabling individual abilities, interests, skills and personalities to be more readily fulfilled.

Alternative M presumes a dedicated interest in the well-being of children and although the illustrated planning program appears quite rigid, the actual implementation of the planned program should be prone to gross flexibility - a trait not unfamiliar to most small schools. Because the program focusses on both processes and concepts, the preparation, implementation and evaluation time involved (preparing activity kits, observing group experiments, questioning children, evaluating progress in skills, evaluating attainment of main ideas) could get a little out of hand.

However, let's not forget that a great many skills involved in science are skills also necessary in other subject areas (for example, observing, classifying, using number, reporting, recording, communicating, measuring, inferring, experimenting) and that an integration of these skills is a distinct possibility and definitely a desirability. In addition, the integration of main ideas in science and in social studies may often allow for more meaningful learning experiences. (For example, studies of rocks, minerals and water may be undertaken more fruitfully while completing social studies units in either natural resources, mining or basic needs).

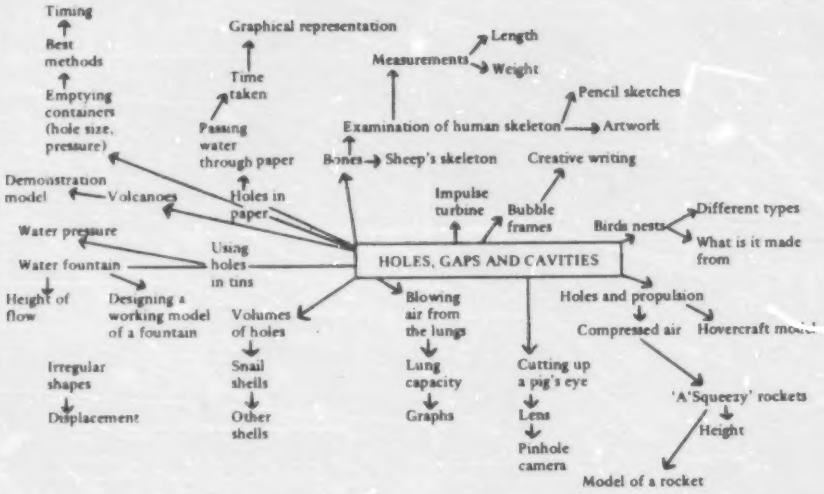
The possible simplicity of evaluation in Alternative T does not recurr in Alternative M. The short answer test or other simple objective form of evaluation will not suffice if a full evaluation is to be carried out. Not that it will require more preparation of written tests - in fact it will require less - but it will require more individual contact with the groups of children. No longer are we simply evaluating knowledge, (Alternative T), but we are observing and defining the progress in the development of the processes - a task which requires considerable vigilance and involvement with the children at their tasks.

Alternative P (for 'Sir', the more progressive teacher, who believes pupil participation in all aspects of work is of prime importance).

Planning, Implementing and Evaluation:

Difficult. The emphasis is likely to be on skills in preference to concepts; children's interests in preference to teacher's convenience; integration in preference to disintegration; mess rather than clinical sterility; active involvement in preference to "board and bored"; continuous subjective evaluation rather than the end-of-unit block-buster; and spontaneous eruptions in place of planned "focussing activites".

To provide an example of a unit plan would be well nigh impossible, let alone undesirable, yet a diagrammatic representation of the activity sequences as written down after they occurred may be of some explanatory help. (See the flow chart on Holes, Gaps and Cavities).[5]



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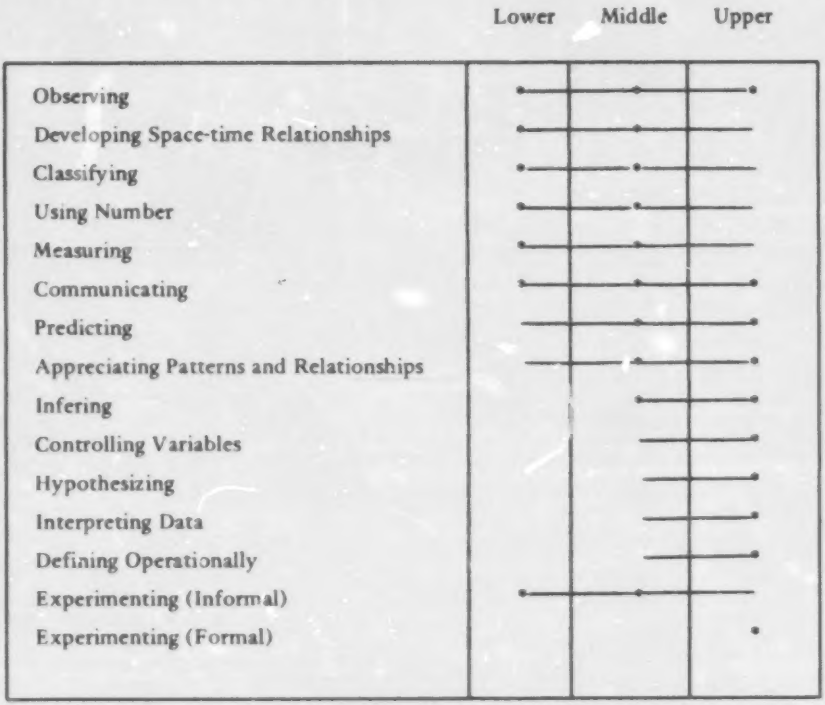
Activities of this type could well have occurred in our own "Sir's" classroom and at this stage perhaps his performance should be dissected. Ennever, in his original version of the "Sir" story, effectively analysed the classroom by asking questions of the reader and I feel we should want to do the same, particularly as I feel your answers to the questions would be of benefit in classifying your own view on this alternative.

Are any limitations placed on what may be discussed in the classroom? What happens to a teacher's authority when he may often have to answer "I don't know"? Is the curriculum just one entwined muster of learning experiences or is it a defined number of specific subject areas? What does the Alternative P teacher do with the 'lazy' child? Do children see the world as a whole, or in terms of subject areas?

There are no correct or incorrect answers to these or other similar questions but it should be sufficient to say that an "Alternative P" teacher, because he will have little written confirmation of his children's attainments, will always be called upon (either by parent, public or inspector) to justify his methods and apparent relative lack of written preparation.

Suffice it to say that the "Alternative P" teacher would see the Agricultural Project Club motto, "Learning by Doing", as his own, and would be process or skill oriented. The organized "Alternative P" teacher could possibly use an overview of processes such as the one illustrated[6] then relate each of them to specific activities or units within each level of the school.

OVERVIEW OF THE DEVELOPMENT OF PROCESSES (SKILLS)



Note:

The asterisks mean a consolidation of skills in those particular groupings but do not necessarily mean that these skills should not be catered for in the other groups.

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SUMMARY

There are not of course. three alternatives to teaching science in the small school. They are as uncountable in number as they are complex in description.

If nothing else has emitted from this short reading, I hope at least the forms of planning illustrated have given some food for thought for those of you going into a small school. Whether you be an Alternative T, M or P, teacher, planning (either formal or informal, written or unwritten) is of prime importance and should not be underestimated in its value to the development of a positive learning environment.

Finally I feel a few "hints and tips" of general application, no matter what the alternative, would be of benefit.

1. Kick yourself, but very hard, every time you turn away a child who wishes to ask a question.
2. Teach only the way you feel most comfortable, don't be intimidated by either traditionalists; moderates or progressivists.
3. Become *very* familiar with the Science 5/13 series of books which have been issued to all schools - they have a message for all of us, in all curriculum areas.

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4. Adapted from - "Science Program - Ferny Hills State School, 1977".
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6. Adapted from "Development of Processes in Science - The Gap State School, 1975".

6

Physical Education

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Physical Education

The teacher in the small school is often a more important person to the individual child than those in other teaching situations. He is a primary influence on his pupils over a number of vital growing years and should therefore carefully consider his role in the physical aspects of education.

Movement is vital to healthy growth and essential to many phases of learning. Physical Education, as a school subject, makes an important contribution to the total education of the child. The teacher in the small school is the primary agent in the process by which the child becomes "physically educated".

Unlike some larger schools, there are no specialists in the area to influence skill development and usually less external influences such as weekend sports. Often the teacher has to cater solely for all ages and both sexes and therefore carries a greater responsibility in the area than the teacher in a larger school.

AIMS AND OBJECTIVES

Authors differ greatly on definitions of aims and objectives. For the purposes of this reading, we shall consider aims to be long term goals with no final conclusion, whereas objectives can be achieved in a specific time, i.e. within a lesson or a limit of lessons. Both aims and objectives have to be carefully considered before a teacher plans his program.

Aims of Physical Education

We shall consider four main groups although these are often subdivided in the literature.

1. Physical Fitness. Includes such areas as endurance (both heart/lung and muscular), strength, flexibility and agility. These are of unique importance to physical education and vital for health, growth and the ability to cope with movement situations.

2. Physical Skill. The development of fine and gross motor skill associated with all aspects of movement.

3. Attitudes Values and Social Skills. This is a large area of aims and includes such traits as co-operation and sharing and attitudes to personal health and

well being. Corbin (1976) calls some of these "affective objectives" and "Personal and social objectives".

4. Fun and enjoyment.

Objectives of Physical Education

These should be decided by the teacher before planning lessons and are sometimes termed instructional objectives.

Examples of objectives:

- Each child reaching a certain level for his age in a particular activity.
- Certain skills of basic movement in balance.
- A small sequence of gymnastics movements.
- Learning a particular dance.
- Each child able to swim a certain distance in a particular stroke.
- Proficiency at a particular games skill and so on.

MOTOR SKILL AND CHILD GROWTH AND DEVELOPMENT

Any teacher of young children needs to understand the growth and development characteristics of the child including the development of movement skill. As the small school teacher is often catering for a large age range, this may be even more important. Detail is not possible here and teachers are urged to consult a basic text in the area. (e.g. Corbin, C., "A Textbook of Motor Development").

By school age, most children have developed a range of basic gross and fine motor skills and have the necessary musculature and heart/lung fitness to participate in a large range of activity.

At this stage, skills can be greatly enhanced and refined with a sound physical education program. This refinement of skill can involve guided exploration with a large variety of equipment as well as more specific teaching and direction. Movement skills can help the child in everyday tasks as well as in play activities.

In our society, sport is quite important for socialization, physical fitness and leisure. A progression of basic movement skills and more specific sporting skills may enhance greater participation and interest.

Motor skills also allow the child to express himself in movement both with and without music.

THE PROGRAM

It is not possible to write out a hypothetical program for a small school as it would invariably not fit into the specific situation in which the teacher finds himself. Such constraints as equipment, climate, inappropriate school grounds, number of children, skill and personality of children and indeed personality and knowledge of the teacher make program planning very specific to each small school.

However, there are certain progressions and principles from which a teacher can select and which he can expand to suit his situation. The implementation of these is probably the only thing that differs with different size schools.

Planning

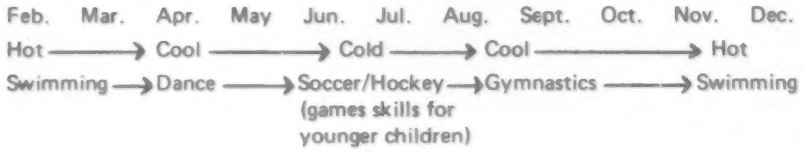
Yearly plan.

Having worked out aims and objectives and having taken into account the constraints mentioned above, the small school teacher can draw an outline of what he would hope to teach in the year.

A program should be seasonal. Obviously, if swimming is a part of the program it should be taught in the warmer months while some other areas may be more appropriate in winter either because of climate or seasons in particular sports.

DIAGRAM 1

Example of a Seasonal Program



How Much Each Week

The small school teacher has much more freedom of timetabling than most other teachers. He can reorganize timetables within a day and can compensate over a number of days for any changes.

Most Education Departments advise approximately 2½ hours each week for Health, Physical Education and Sport. Health, on its own, is a vitally important aspect of the curriculum and should, therefore, have its own allocation. We might assume

then, that there are two hours for sport and Physical Education.

Possible combinations.

1. 4 x 30 minute lessons.
2. 2 x 30 minute lessons and 1 hour sport.
3. 5 x 25 minute lessons.

Unit Planning

A unit may be anything from 3 or 4 lessons to say 14 of 15. An outline of the planning for a unit should be carried out at the start of that unit while the full planning of individual lessons will happen after the completion of the previous lesson.

DIAGRAM 2

Example of a Unit Plan
Gymnastics - Balance

Revision of previous gymnastics.
Exploration of balances on ground.
Exploration of balances with partner.
Exploration of balances in larger groups.

Use of low equipment in balance e.g. seats, box, wall.
Use of higher equipment.
Sequence work using balances and gymnastics movements.

Grade 6 and 7 may cover the entire unit in say 12 lessons while younger classes will only cover sections.

Note: Aims and objectives must be stated before the unit plan is made.

Lesson Planning

All teachers should have some individual lesson planning although this can be greatly reduced with more experience. It is wise for the beginner teacher to consider full detail such as objectives, content and teaching points. Later just a summary of objectives and content may be sufficient.

A lesson card is quite a good idea and these may be placed in an envelope in the program.

DIAGRAM 3

Example of a Lesson Card

Games Skills No. 3

Intro.
Running, dodging, "tread on partner's shadow".

Skills
Younger Rubber ball - roll and chase, bounce/catch - partner. Bounce/catch hoop in middle. Walking - bounce/catch.
Older Tennis ball - throw/catch partner - vary distance. Running - throw/catch.

Games *Younger* - "Keep basket full".
Older - "Forcings back" with tennis ball.

Card can fit into teacher's pocket and then into envelope in program.

LESSON ORGANISATION AND GROUPS IN THE SMALL SCHOOL

Compromise will have to be a feature of the program. It is obvious that unless the teacher has other help (parents and teachers aides) his class will have to work in the same area at the same time. In addition, the teacher should be present when any new or dangerous activity is being attempted.

Here are some possibilities for the organisation of a class with a wide age range.

1. The whole class working on the same type of activity with the differences coming in their response to the task. e.g. Use of a theme in educational gymnastics.

2. A game involving the whole class.

3. Two or three groups working on a different level of activity with the teacher moving from group to group.

4. Completely individual work where the children have a progress scheme and tasks on cards. They can move individually or with a partner to the tasks assigned to their ability.

5. The use of *teachers* in the teaching-process where the older children assist the teacher by working with a group of young children, (not to be overused).

SUBJECT AREAS WITHIN PHYSICAL EDUCATION

In broad terms we shall discuss the following areas:

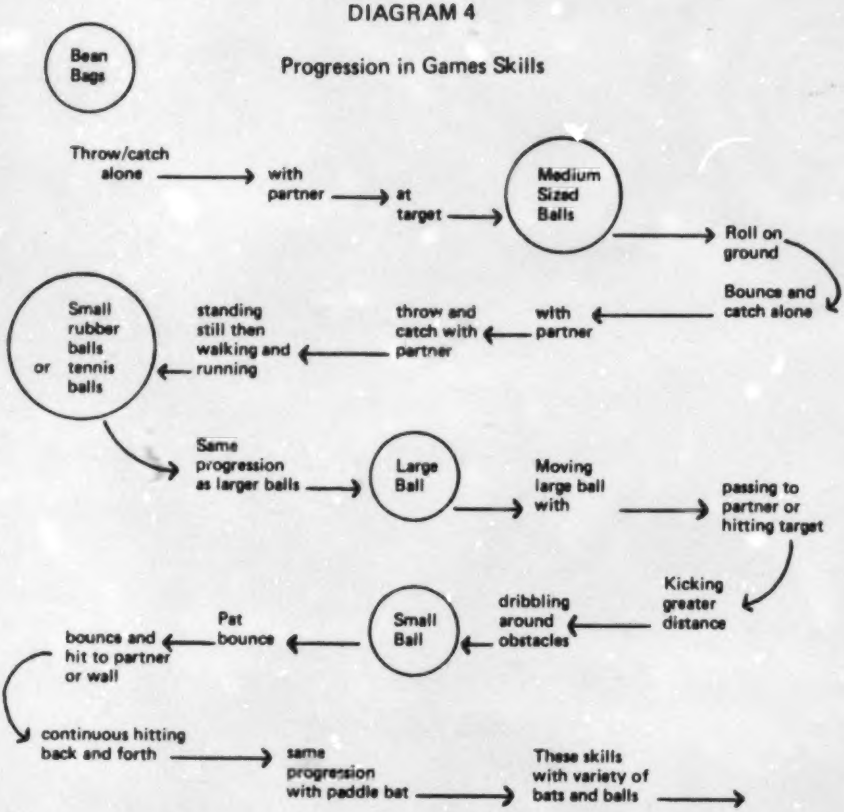
1. Games skills and sport
2. Aquatics
3 Dance
4. Gymnastics

The scope of these areas is much too great to be covered fully in this reading so an attempt will be made to look only at the broad outline and progression of the subject area. Teachers will find extra reading material necessary and references will be suggested.

GAMES SKILLS AND SPORT

Elementary skills of games and play are essential for any children who wish to take part in school activities, both in elementary and secondary school. Therefore, a plan is made here for a "back to the basics". Most adult sports are quite complex with very specific rules and behaviours. It is not necessary or practical to structure our pupils into a couple of specific sports.

DIAGRAM 4



A grade or age level cannot be allocated to the stages in this progression so experience and maturation play an important part. Children in the small school will be at all different stages of this progression so a variety of groupings and individual practices will need to be employed.

The Structure of Games Movement

What We Do:

body impetus skills - walk, run, jump, dodge, skip, hop
manipulative skills - roll,

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- kick
- dribble (with bat, hands, feet)
- field (with hands, feet, body, bat)
- bounce
- throw: underarm (bowl), overarm
- catch
- strike (with hands, bat)
- head

What We Move or Use:

- hand(s), fingers, palms, fists
- feet: inside and outside edges, toe and instep, heel
- head
- body: elbows, shoulders, chest, thighs, etc.
- bean bags
- balls of various sizes, weights and shapes
- bats: short and long handled, sticks
- quoits
- targets: free standing, wall, person
- nets and posts
- wall and ground markings

Where We or the Equipment Moves:

- in place, from place to place
- direction and aim: forwards, backwards, sideways, upwards, downwards, turning
- level: high, medium, low
- position of body: standing, sitting, kneeling etc.
- position of equipment in relation to body: in front, back, side, above, below, etc.
- pathway: ground, air

How We or the Equipment Moves:

- force: strong, light
- time: fast, slow
- flow: going and stopping, continuous
- space: taking up a little or a lot of space (size), making a curved or a straight movement (shape)

Relationship to Others:

- alone, pairs, threes, fours, class groups.

The skills to be taught may be chosen from these and then practiced in a game or relay.

Games

Low organization and plenty of activity are essential for games. A teacher should refrain from long explanations and should ask himself at the end of a games session "how much did each child actually move".

Children enjoy their own games and much of their free play involves making these up. The small school teacher can make use of this trait in the group setting. It is obvious that some games will be too difficult for the younger classes and too simple for the older ones, however both groups can become quite used to organizing a game by themselves while a teacher works with another group on skills learning. Occasionally an older child may be used to take a game with the younger ones.

Rarely it is necessary to use circle games (where only one or two children are active) or elimination games.

NOTE: Games books are essential (see ref. list). The publication by the Queensland Education Department "Games Program" is an excellent start.

Sport in The Small School

A small school teacher has to decide which sports may be the best to teach. Some considerations which effect this decision are:-

1. Sports played locally
2. Sports the child will meet in high school
3. Sports suitable for all ages and both sexes and which allow for maximum participation.

Fully structured sport is not really necessary for the under ten year olds and if possible, the older ones should be introduced to a number of different sports.

The Teaching of a Particular Sport

Many small teaching and coaching books are available and the teacher should acquire one of these for each sport he is teaching. "Know the Game" series are

quite sufficient for this introduction. The following proceedure may be used in sport teaching:

1. Practice of the basic games skills involved;
2. Small games and play situation using these skills;
3. Simplified versions of the sport with some of the rules;
4. Gradually introduce more rules and practices appropriate for the age.

Inter-School Sporting Activities

Many small schools have exchange visits with other schools and indeed, some small schools often fit into an inter-school program. Allowance should be made for the size of the school, and teachers must guard against that competition governing the entire sport and physical education program. Inter-school visits have a very good social and sporting value as long as winning does not become the primary aim.

Occassionally it may be possible to have combined sports days in which inter-school rivalry is completely forgotten and children are mixed up when teams are chosen.

AQUATICS

Obviously the small school will rarely have a pool close at hand and in some cases a swimming lesson involves a lot of travelling. The beginning teacher should observe closely departmental regulations regarding swimming and take the utmost care, particularly if a river or creek is being used. Outside help may be necessary to allow an effective teacher pupil ratio and adequate supervision for those not swimming.

One solution may be the combination of two or more small schools for their swimming program.

Aims and objectives of a general physical education program certainly apply to swimming. The water is an excellent medium in which to teach movement skills and to have fun. However, unlike other areas, we must add the need for survival teaching so that all children can, at least, tread water and make their way to the bank as well as have a knowledge of life saving techniques.

Content and method in swimming lessons is very well covered in the handbook on swimming from the Queensland Education Department. The small school teacher will have to adapt this progression to his own situation. Group work will be a feature of the program with the probability of more games activity and less teaching of the more advanced strokes. The freedom of programming for the small school allows for readjustments on hot and cold days, e.g. taking longer sessions

on hot days and readjusting the timetable on another occasion.

The Scope of the Swimming Program

Adjustment to the water.
Supporting the body in deep water.
Freestyle stroke.
Breast-stroke, Back-stroke and side-stroke.
Lifesaving.
Games, relays and games skills in the water.
General motor skills work in the water.
Tabloid carnivals.

GYMNASTICS

The broad term "gymnastics" may include a large area of movement such as perceptual motor skills, movement exploration, direct tumbling and balance activities, rhythmic gymnastics and in a few situations, olympic gymnastics.

Use of Tasks and Themes - "Educational Gymnastics". Exploration of movement both with and without apparatus is sometimes referred to as Educational Gymnastics. A child is set tasks sometimes only having a single response (direct task) or many possible responses (indirect). A limited task narrows down that choice.

For example: *Direct:* "Take a hoop, place it on the ground and with two feet together, jump into and out of the hoop going forwards".

Limited: "Find as many ways as you can of jumping in and out of the hoop".

Indirect: "Free play with hoops".

With a little bit of practice, a teacher can guide a class's learning through a large range of gymnastics with the use of tasks.

Themes: A theme is sometimes used to tie a unit of tasks together both in the mind of the teacher and the child. Such themes may include transfer of weight, balance, twisting and turning and flight.

The great advantage of this type of teaching to the small school teacher is that each child can progress and follow tasks at his or her own rate. For example, we might use the task "use your hands and feet to move in and out of that hoop which is on the ground". The young inexperienced child may just use hands and feet with a frog like movement whereas the more skilled child may perform a cart-

wheel or a movement requiring more skill. Specific movements in gymnastics such as balances, rolls and vaults may be covered within themes.

Equipment: many forms of equipment may be used to help the child learn greater control of his body. This may include conventional gymnastics equipment such as bars, mats, balance beams and vaulting equipment as well as the not so conventional. Tree trunks, tyres, seats, grassed banks, and walls may be included. Smaller equipment (hoops, ropes, bean bags etc.) can add further to the scope of a gymnastics unit.

The teacher should consult some references for the endless possibilities of gymnastic activity. He could possibly choose one which uses themes and another which is more direct and then combine the approaches to suit.

DANCE

"Creativity" in dance is commenced with self-expression through movement. The child is encouraged to solve movement problems and to portray feelings and emotions with movement.

Dance has been used through the ages for cultural, religious and recreational reasons. The dance forms practiced in our schools come chiefly from the areas of creative, folk and social dance.

Creative Dance

This form of dance is concerned with self-expression through movement. The child learns to express feelings and experiences as well as to think creatively. The variety of uses of movement explorations and music are many and it is recommended that a basic book on Primary School dance be used in a beginning program.

Folk Dance

Folk dances allow a teacher to combine physical education with social studies. Dances must be chosen that are simple enough for young children, unless the class is divided for this activity. The older group may learn quite complex folk dances as well as square dances. Most dance records give full instructions although it is very wise for the teacher to make sure that he knows the dance fully himself first. Singing dances may be appropriate for the younger children.

Social Dance

Dances are more common in the country than in the city so it is quite likely that the children may attend these out of school time. It is a good idea for the teacher to use dances which are popular locally and yet are simple enough for the children. He may arrange a school dance from time to time and use the physical education lessons close to that time, to teach dances. Records and instructions to all the simple dances are available and modification can be developed by the individual teacher.

REFERENCES

Most of these are either free or quite cheap. They make a good starting point from which a teacher can build.

Corbin, C.B., *"A Textbook of Motor Development"*. Brown, Iowa, 1973.

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Department of Education (Qld.), Curriculum Guides in Swimming, Gymnastics, Games, Athletics.

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7

Art

David Love is currently completing an Associate Diploma of Fine Arts at the Seven Hills College of Art. He is the principal of the Laidley Central State School. Apart from his present position, he has had experience in Queensland primary schools as teacher, art advisory teacher and principal of other small schools. During the 1975 Queensland Education Centenary Celebrations, his demonstration of teaching in one-teacher schools of the past was recorded by the Department of Education and is now the introduction to their film, "He Used To Stand Up and Talk All Day".

Art

Very few schools complain about an overabundance of materials, tools, storage space, cleaning facilities and display areas. Small schools are no exception but they do find themselves with a large number of class groups labelled "composite grades". This means a child may be the responsibility of the one teacher for a number of years. Consequently, in the area of Art, the teacher often finds he has used all his "best shots" in the first year and has to come up with a new set. Even in the largest schools, children tend to imagine they've done it all before so we need to ensure careful planning and organising in order that activities aren't meaninglessly repeated.

Many of these problems can be overcome by the organizational methods selected.

The most widely adopted method of presenting art to children involves having the whole class group doing the same art at the same time.

I suggest that this method has limited application in an art program but serves as a starting point to introduce new materials and tools to a large group when specific safety or organizational procedures (such as methods of cleaning up) need to be discussed. It is particularly relevant, however, in the lower school where motivation in the form of a story, talk, a visitor, film or similar experience is presented to the class as a whole and their reactions are expressed soon afterwards through materials.

Teachers choosing to use this approach could be encouraged to look at two systems. These systems are basic to other approaches to be discussed later but appear more obvious when considered as a whole group strategy.

In the areas of textiles, modelling, carving, and printmaking, it seems important that a planned sequence of activities be undertaken. If, for example, a sequence of thirty printmaking activities from hand prints through to lino cut prints were developed, the lower school might be concerned with the first ten. The middle school would choose to repeat a few of the earlier activities and then concern itself with activities in sequence from ten through to twenty and likewise, the upper school, taking some activities to repeat from the earlier two groups, would complete the sequence. It should become obvious at this stage that to have an effective art program, some whole school planning is necessary. For the teacher with composite grades, the ten activities suggested in this example would be varied to extend the activities over a longer period, e.g. a potato print becomes a cut potato print, a design using some of the other children's potatoes, a group printing activity on a huge sheet of paper.

This method of sequencing allows children to develop their ideas using skills commensurate with their ability. It gradually builds up a background of printing ideas so that children are able to predict the results of their activities.

The second system involves using combinations and fits most easily into the areas of painting, drawing and construction.

In any painting activity, we are confronted with four variables - the surface, the applicator, the medium and the theme. We tend to use the same surface, applicator and medium and only vary the theme, thus missing out on many situations which require the child to solve problems creatively and provide opportunities to explore new materials and media. Considering the resources at hand, we can make up a set of cards in each variable. Under "surface", for example, we could have brown paper, alfoil, clear plastic, sandpaper and hessian. For the applicators, we could have the half inch brush, a two inch brush, a sponge roller, a rolled newspaper stub, a toothbrush. Under media, we can list vynol paint, tempera paint, tempera paint and PVA glue mixture, powder colour mixed with egg yolk, powder colour and flour and water glue mixture. To complete our set of cards, we can choose five themes preferably from the children's own experiences. If we shuffle our sets of cards and take one from each pile, we may, by chance, have an activity which uses alfoil, a toothbrush, vynol paint and deals with the story we had in class this morning. In fact, we have sixty variations from our suggested set of cards, each of which could become an activity. If we pursue this idea further and list ten or fifteen alternatives under each category, then the number of possibilities runs into thousands.

The same idea can be used successfully for construction where the variables used could be, materials, method of joining, method of surface decoration and theme. Here, one or more materials may be chosen and we may end up with the problem of making an elephant out of alfoil and plastic using wire as a joining material and decorating the surface by glueing on coloured paper.

Thus we have the two systems of either sequencing or using combinations. Let us consider organizing these ideas in different ways in the classroom.

A skeletal plan of a year's work can be quickly drawn up using these ideas.

Painting & Drawing	Textiles	Construction	Modelling & Carving	P.M.	Enjoyment

Activities are listed in the boxes provided, under each content area heading, using either the sequence or combinations idea. Once a technique has been listed, the actual theme for the activity can be decided upon at a later date, maybe even at the very time the activity is being done by the children.

Activities may be chosen by selecting from left to right across successive rows in the diagram. This ensures that over a short period the children are exposed to a wide variety of materials and experiences while still meeting with certain activities in a predetermined sequence.

However, a teacher may choose to work in a particular content area for a longer time, in which case, the activities would be chosen by going from top to botton in the one column.

Over a year therefore, the children would once again have experience with a wide variety of materials. This same plan can be used with other systems besides the "whole class, same ...z" idea.

The following suggestions involve having only a small group or groups involved in art at the one time, with the whole class rarely doing the same art activity at the same time. I see several advantages in using this approach.

If a small group only is involved, they are usually able to have the extra room they may need to undertake the activity.

With the limited resources available, the members of the small group can often have tools on a "one each" basis. Smaller groups doing activities means less mess to clean up each time and usually much less noise.

Because the teacher cannot spend the whole time with the "art" group, this forces the teacher into the situation where he/she has to rely on children to:-

(a) need no more than initial motivation
(b) obtain the materials needed
(c) tidy up and replace the equipment
(d) work on their own without feeling the need for step by step instruction
(e) work in an atmosphere of responsible freedom.

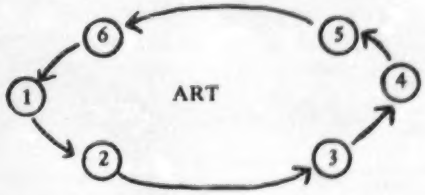
Consider breaking your class into six groups and having the whole class involved in art at the same time. In this example, let us have the whole group involved in work from the same content area, e.g. Printmaking.

Six groups of five children -

group	1	potato print
	2	gadget print - bottle tops
	3	gadget print - tin cans
	4	string print
	5	alfoil print
	6	textile print

This would mean that, by rotating through the activities, the one planning session by the teacher would last for six art periods. If a particular piece of equipment is needed, e.g. carving tools for potato prints, only six of these tools would be needed.

To overcome the situation where we have six groups using paint at the same time, we could have the whole class involved in art at the same time but by varying the content areas, we could plan some activities that were "dry" or involved a minimum of mess.

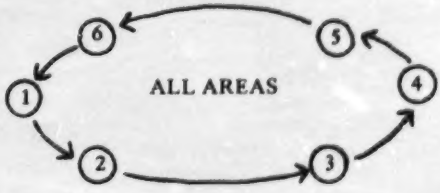


Six groups of five children -

group	1	rubbings
	2	painting
	3	textiles (applique)
	4	construction - using folded paper strips
	5	modelling (clay)
	6	printing (card print)

This rotation would be for six periods as before. However, groups 1 and 2 could take place outside and/or on the veranda/wet area. This means any mess is small and is contained within a more suitable area. It also means there is more elbow room inside. Place the outdoor groups where they can be monitored to prevent behavioural problems.

Another approach which requires organizing a section of the day around this idea involves combining art with other subjects in a rotation. There are areas in other subjects which do not require as much teacher direction. Some of these activities can be provided to produce the following model.



Six groups of five children -

group	1	Social Studies
	2	Mathematics
	3	Language Arts
	4	Science
	5	Art - messy
	6	Art - clean

This system gives the added advantage of allowing the art activities to be introduced in sequential order. Activities can therefore be planned to lead from single to more complex problems, thus allowing the children to build up a wealth of experiences and ideas upon which they can draw e.g. -

1st rotation	stick puppets
2nd rotation	sock puppets
3rd rotation	glove puppets with plastic heads
4th rotation	theatre, backdrops and props.

Any system which allows children more freedom than they are used to seems to need a cautious implementation. This is especially true of art activities and one would hope group activity in art would not be discontinued because of problems in the initial stages.

A teacher's choice of organizational method is surely coloured by his own philosophy of education. I feel that too often our own philosophies are coloured by limited personal experience and are not based on carefully organized research. Rather than state a philosophy for education through art, I have collected the following statements from a wide variety of sources, in the hope that it may provoke constructive discussion.

> *"Drawing is recommended as an essential to the child's intellectual development. It must be understood that the skill, or talent, for copying is quite separate from the kind of drawing which expresses the child's own thought and which will help to develop clear thinking.*
>
> *The kind of drawing (copying), which is, of course, useful in school work, comes naturally, and in its own good time to the child who has had the drawing experience, but if we require it, or encourage it, before creative drawing is established, the power to create is crippled, and full development of personality is impoverished.*

THE DON'TS:

Don't
- *have copying in any form.*
- *ever suggest that the child "fill the page".*
- *restrict the number of sheets of paper.*
- *give square paper - it has no obvious "right way up".*
- *resent the long duration of the scribbling stages - and never try to hurry a child through them - it will retard his real growth, even if it seems to have succeeded.*
- *give modelling tools - the child's hands are his tools.*
- *provide pre-cut shapes of any kind.*
- *cut any pattern, such as a flower, star etc."*

From "Art for the Child Under 7"
F. Derham

"If marking is found to be an indispensable incentive to work, then surely the teaching itself is at fault, and there must be some failure to stimulate and hold the children's interest sufficiently. By introducing a balanced range of activities it should be possible to sustain the children's creative effort through the appeal and satisfaction of the work itself."

"Art in the Primary School"
Melzi

"Drawing and painting have similarly been regarded as skills that can be taught, or more accurately, that should be taught in a certain way. It marked a great step forward in the liberation of the creative activities of children when they became free to paint what they liked in class and when, as in Victoria recently, the attempt to set examinations in "Creative Activity" was abandoned. But there are still far too many schools in which art classes are concerned only with neatness, accuracy and 'representation' or 'nearness to reality'.

The purpose of this paper has been to emphasize the importance of not teaching how to paint until the pupil feels the need to know, and then only if his need is not merely for conventional conformity."

"The Importance of Not Teaching How to Paint"
O.A. Oeser

"In a practical classroom, for instance, many children are not creative under the following circumstances:

1. *When they paint in an inhibited, slow, frightened way.*
2. *When they paint in such a way that they solve no problem, surmount no difficulties.*
3. *When they go through exercises with minds on techniques instead of hearts alive with excitement.*
4. *When they try to emphasize the correct visual appearance of things."*

"Art Education and the Child
John Dabron

"The use of dittoed drawings, colouring books, and numbered painting kits. One of the greatest discouragements to art educators is that classroom teachers and parents persist in giving their children large numbers of dittoed drawings, colouring books, and numbered painting kits. Sometimes they do it in the name of art, and sometimes they use such devices in the teaching of reading or arithmetics. Why do art educators object so strongly to such a practice?

To begin, the only thing that a person can do with a ready-made drawing is to colour it. There is no opportunity to give form to concepts or emotions; there is no freedom to compose the elements within the picture; and in numbered painting the painter is not even permitted to choose his own colours. Consequently, the colouring of ready-made drawings is not an art activity, and if it is not an art process, it does not have the value of that activity. In fact, it is about as valuable as tracing a paragraph that has been written by someone else. It is nothing but "busywork". Yet parents and teachers insist that dittoed drawings and colouring books are valuable in developing artists, even though artists do not agree. They claim that the use of such devices helps to teach neatness and eye-hand control. But anyone who is slightly familiar with the creative mannerisms of the artist is immediately aware of the fact that neatness is not one of his virtues. Certainly it is rare for him to draw outlines of things and neatly apply colour inside them; instead he works in a great variety of ways, many of which are sloppy rather than neat.

Eye-hand co-ordination can be gained just as easily by making and colouring one's own drawings, and surely there is no evidence of greater co-ordination in the colouring of pictures that have been made by someone else. In fact, the skill of co-ordinating the hand and the eye is more apt to develop if a person does his own work because there is more interest and enthusiasm involved in expressing personal ideas and feelings than there is in colouring someone else's.

In addition to the fact that the colouring of dittoed drawings, colouring books and numbered paintings is not an art activity and not a means of developing characteristics peculiar to the artist, it does not lead to self-confidence in the making of visual symbols. It leads instead, to a lack of confidence and to a dependence upon the teacher."

The Teaching of Art

"During the past six years, Dr. Torrance and his associates at the Bureau of Educational Research have studied over 15,000 boys and girls from nursery school to the sixth grade. Their findings show that most children start life with valuable creative potential and that most of them have it knocked out of them by the time they reach the fourth grade. It is not that parents and teachers deliberately squelch creativity; it is rather that they fail to recognize it. Often they mistake it for unruliness, eccentricity and even stupidity."

"There is no question that "creativity involves getting away from the obvious, safe and expected and producing something which - to the child, at least - is new", says Dr. Torrance. This makes extra trouble for teachers and parents. The child's constant questioning, experimenting and exploring can make him trying to other people."

"In most elementary classrooms the good pupil is the one who repeats what he is told and makes pictures like the ones in the book. The creative youngster, on the other hand, wants to make up his own stories. He draws what he actually sees the way he sees it and not necessarily the way he is supposed to see it. The child in the fairy story who blurted out, "But the emperor has no clothes!" was undoubtedly the creative type and undoubtedly he was royally squelched."

"Creative thinking, like the thinking required in the IQ tests, is a problem-solving process."

"The qualities that make us creative are the same no matter where you find them - in children or adults, in art, science, politics or industry."

"Because children's creativeness so often comes out in painting or sculpturing doesn't mean that they are going to grow up to be painters or writers, or even that they have exceptional artistic talent. It simply means that they are expressing with paint and clay the qualities of mind that may someday make them creative as doctors, scientists, businessmen - and as husbands and wives, parents and friends."

"But in actual practice, Dr. Torrance has found, "society is down-right savage in its treatment of creative people, particularly when they are young"."

"Dr. Torrance, reviewing scores of personality studies, listed the characterisations that have been found to describe creative children: "accepts disorder . . . . attracted to the mysterious . . . . playful . . . . likes to toy with ideas . . . . offbeat ideas . . . . emotionally sensitive . . . . a fault finder . . . . spirited in disagreement . . . . courageous . . . . takes risks . . . . energy to burn . . . ."

"How We Discourage Creative Children"
John Kord Lagemann

"Too much information, too much direction, or too much control is just as bad as a laissez-faire approach to teaching. It keeps the child from acting as an artist because it does not allow him to make decisions about aesthetic organisation, content, or subject matter. If he fails to act as an artist, he cannot receive the values that the art process has to offer."

"Consequently, the teaching of procedure should not be carried to extremes, or it may result in overdirection, non-art, and miseducation. It must be confined to the presentation of general information about a process, and it must not include directions about such things as the number and kind of objects to include in the product; the style of working; the shapes, colours and

textures within the composition. This does not mean, however, that the instructor should refrain from discussing such matters with his students as they work, for that is part of his job as a teacher of art. On the other hand, it does mean that such information must not be included in the teaching procedure because it then has a dictatorial effect, instead of an advisory effect, upon students."

"Consequently, the art teacher is advised to maintain a balance between the introduction of new procedures and the repetition of old ones."

Art Artists and Art Education
Lansing

"Colouring dittoed drawings, for example, and following step-by-step systems for making an Easter bunny do not allow the student to give form to his own ideas and feelings. Consequently, they are not art projects and should not be used as such in the elementary and secondary schools."

"COPYING: From what has already been said, it seems advisable for an art teacher to avoid art contests, dittoed drawings, colouring books, numbered painting kits, and uncomplimentary comparisons of children's drawings. It is also wise to discourage widespread copying."

"TRACING: Like copying and the colouring of ready-made drawings, the use of tracing as an educational device implies an unfavourable criticism of the student's visual symbols. It forces him into a comparison between the traced image and his own, with the suggestion that the reproduced symbol is superior. Otherwise there would be no point in tracing; at least there would be no need from the child's point of view, and this means that it should not be used by most teachers as an institutional device because it might lead to a loss of self confidence in art."

"There are other influences, however, that run counter to good art teaching. One example is the urging of parents to do things that are cute, pretty, useful or clearly educational. Demands of this kind are usually based upon a misunderstanding about the nature of art. Surely, art is not cute, and in most instances it is neither pretty nor useful in the way that parents expect it to be.

Nor is its educational effect always crystal clear, especially to the uninformed observer. The teacher may know that, but if he is sensitive and subjected to enough pressure, he may give in, no matter how unrealistic it is. The result is that education through art is replaced by education through something else, such as the potting of plants in eggshells. Education of this kind is more detrimental than beneficial."

Art Artists and Art Education
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"All art competitions be discouraged since they are contrary to the principles of art education."

The Melbourne UNESCO Art Seminar of 1954

"The art teacher should know something about children, about child art, and about the people with whom he works. The fact that an individual considers himself to be an artist does not automatically make him a gift to education. He must work with children who have different interests, understandings and capabilities."

Art Artists and Art Education
Lansing

"The teacher helps the child to acquire skills, not as a prelude to the art activity, but as an individualized experience that grows out of the activity itself. There is no such thing as colours that do or do not go together; instead, there is a belief in the child's ability to learn by doing, to learn from the medium with which he is so directly involved.

WHAT YOU CAN DO

You can begin to take these steps toward openness in art;

1. *Move away from art as a "subject" and begin to think of it as a natural means of expression, as communication and as an integral part of the school day.*
2. *Let children know you respect their interests, abilities and innate creativity.*

3. *Help children to find beauty in the everyday environment, to bring that beauty into the classroom, and to share it with others.*
4. *Move away from group art lessons emphasising a product, and toward individualized help emphasising process.*
5. *Making a wide variety of art materials accessible to children on a daily, continuous basis.*
6. *Help children discover what they can do with various art media.*
7. *Think of yourself as a guide, a helper and one who suggests art ideas and experiences.*
8. *Help children with skills as needed, through individualized evaluations of the art process.*
9. *Move away from requiring that all children engage in the same art experience at the same time.*
10. *Move away from demanding twenty look-alike art products from twenty children.*
11. *Avoid giving art experiences to children as a reward.*
12. *Help children find enjoyment in the arts."*

Schools are for Children
Alvin Hertzberg & Edward F. Stone

After having read some of the preceding statements, you may well ask where you would find the time, energy and resources to fulfil these objectives, but then who said educating children was easy.